

Regional Transportation Plan



Let's Keep Moving!





What we are going to cover.....

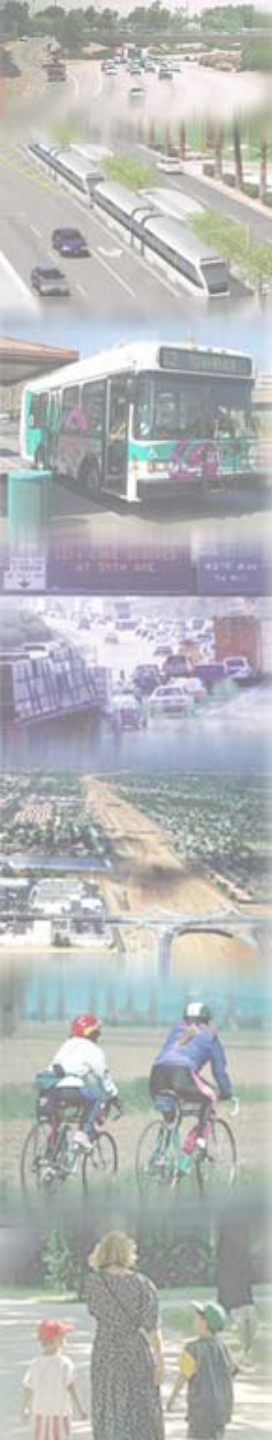
- What is the Regional Transportation Plan (RTP)?
- What are the Growth & Transportation Challenges?
- Overview RTP Background Studies
- Overview RTP Methodology
- Schedule



What is the Regional Transportation Plan?

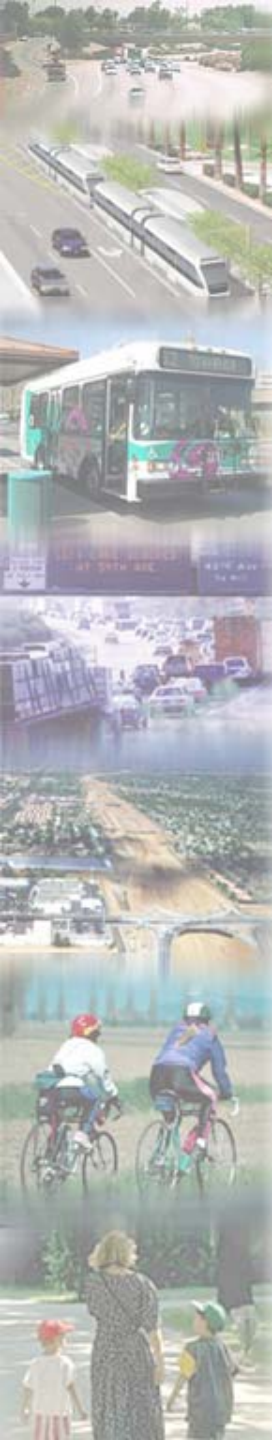
- Largest planning initiative in the region in 40 years.
- Blueprint for regional transportation investments for next 20 years.
- Policy framework that identifies transportation priorities.
- Plan guided by performance goals.

...The Plan must provide choices

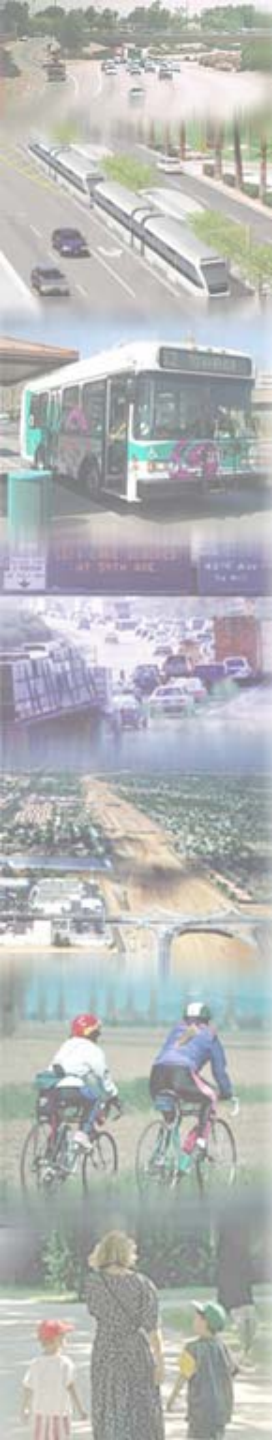


Why is the Plan necessary?

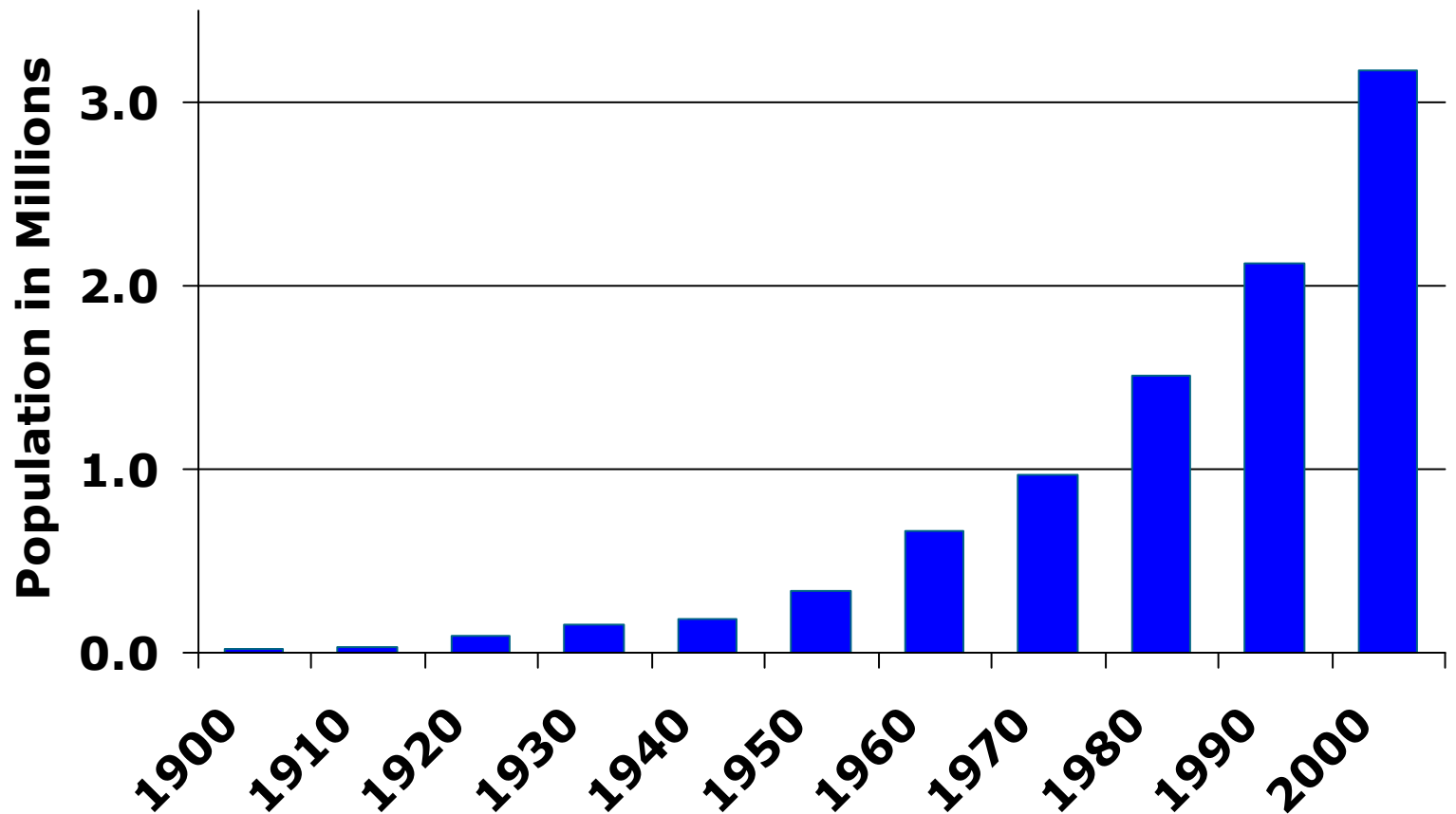
- The sales tax is expiring in 2005, leaving us without a major source of funding for transportation.
- Population growth is inevitable. Projections show 6 million people in the Valley by 2030.
- Congestion costs time and money. The ability to move people and goods is the backbone of the economy.



What are the Growth & Transportation Challenges?



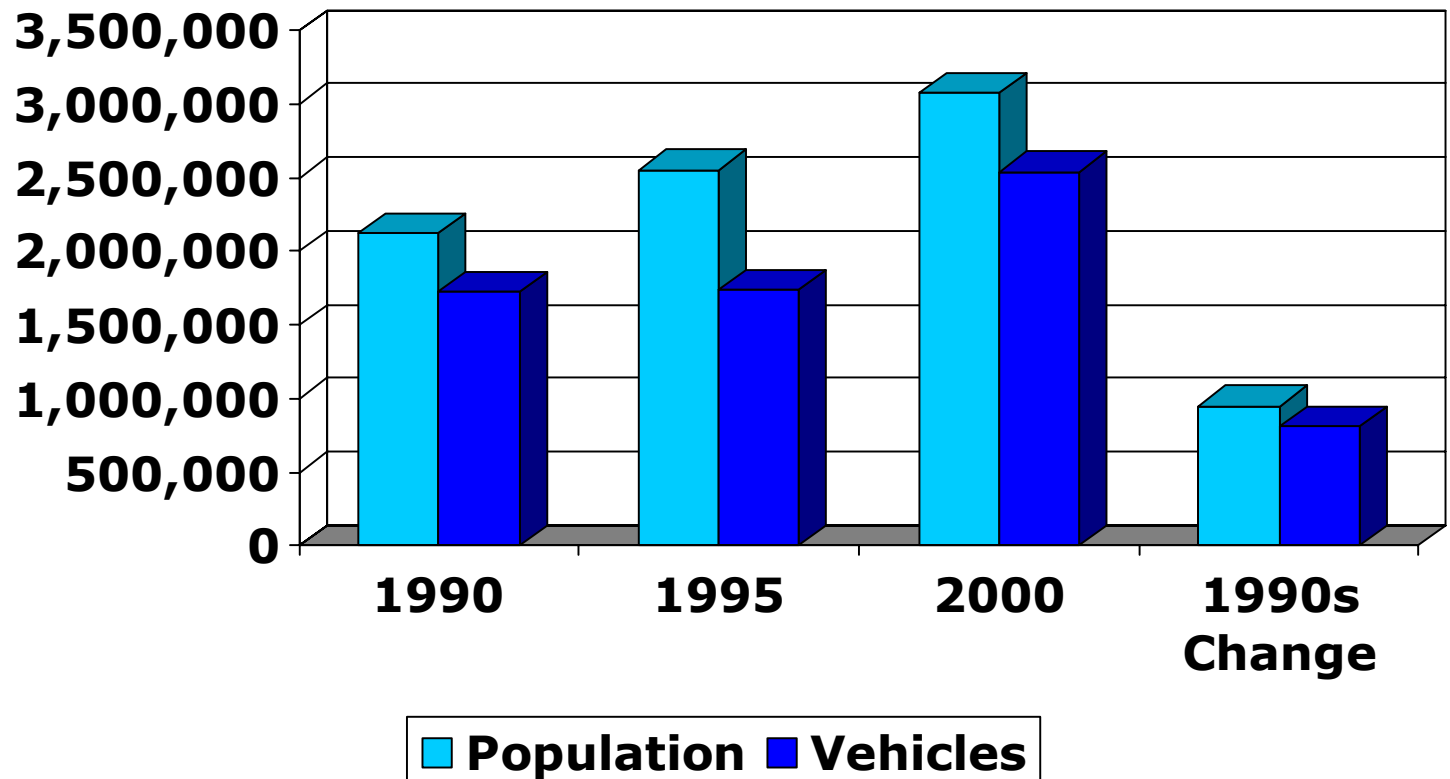
Maricopa County's population grew by about 45% each decade since 1960.



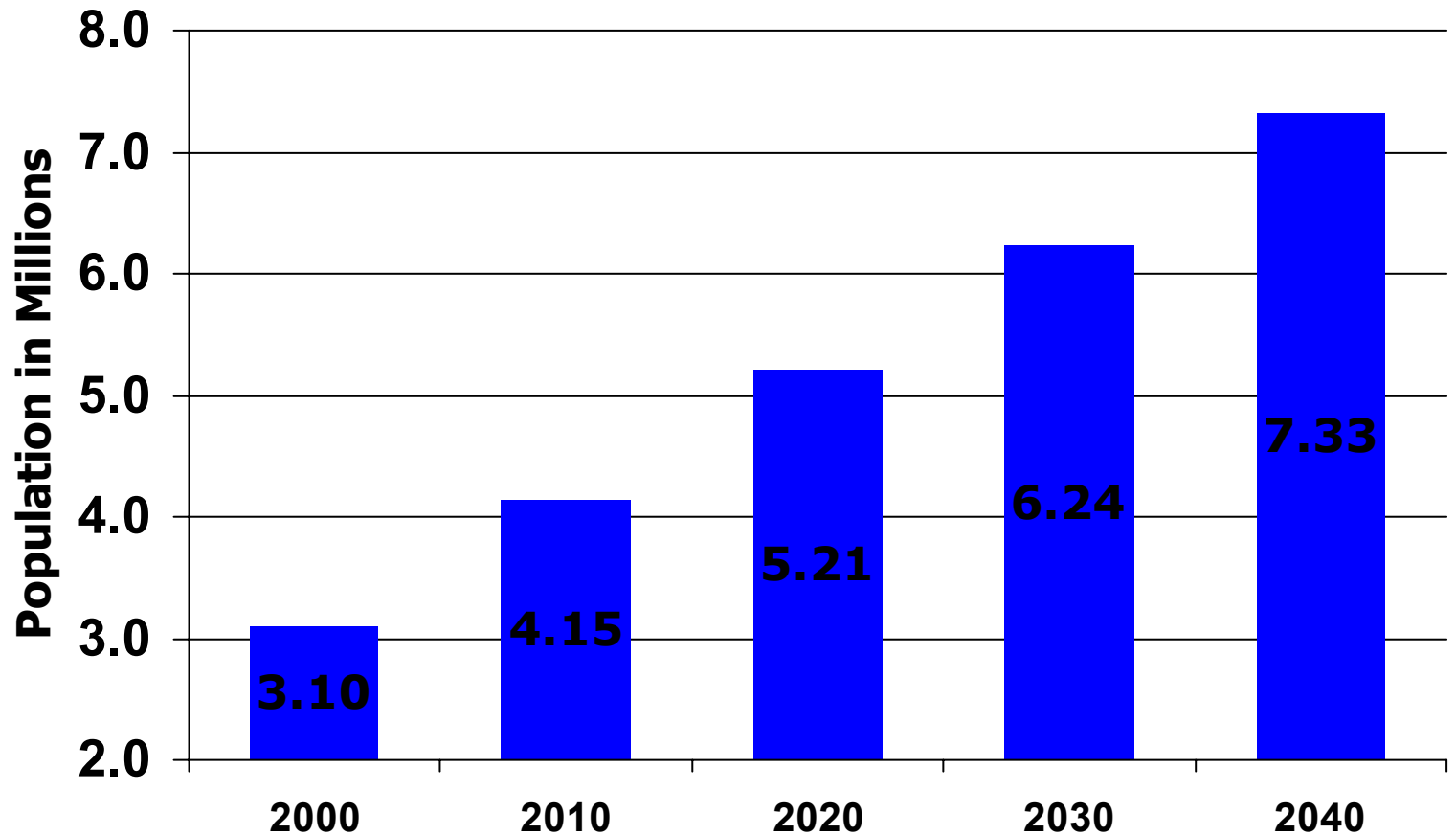
Population & Vehicle Growth: 1990 to 2000

Population Change 950,000

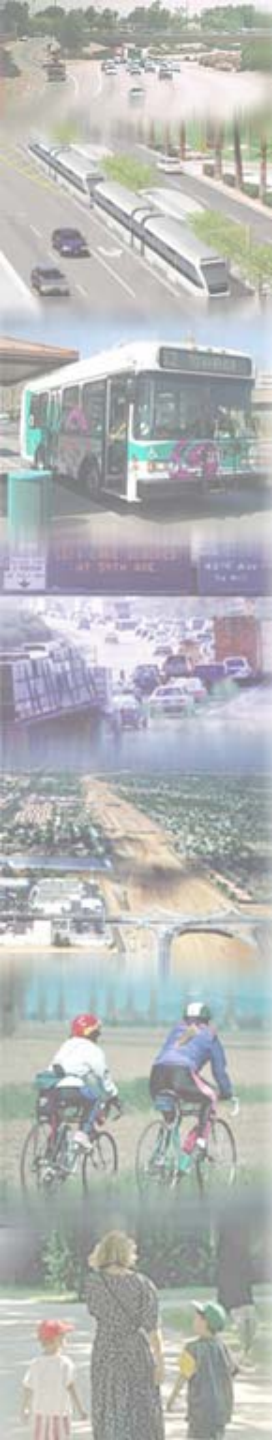
Registered Vehicles Change..... 810,000

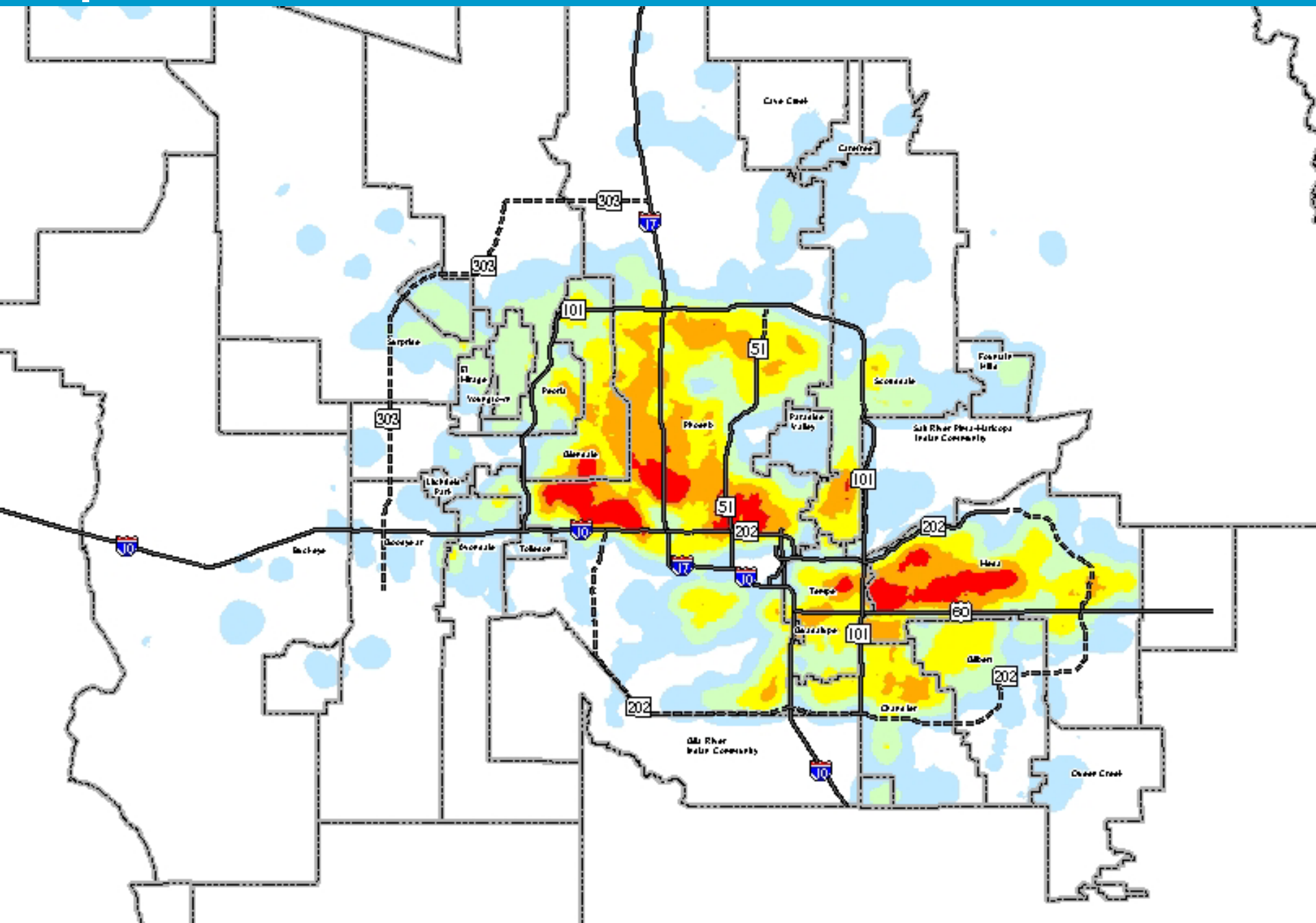


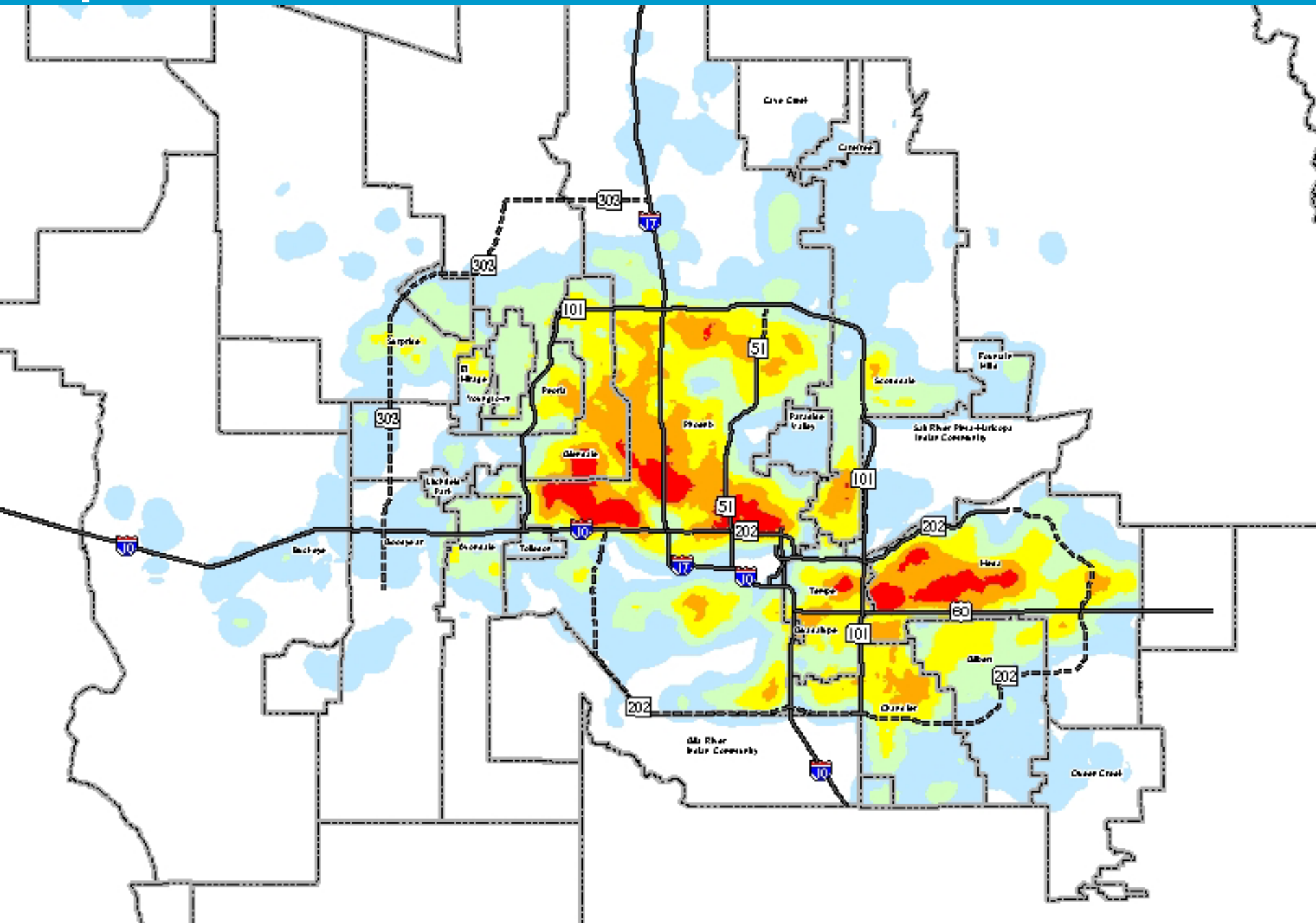
The region will continue to grow.



Where will population growth occur?

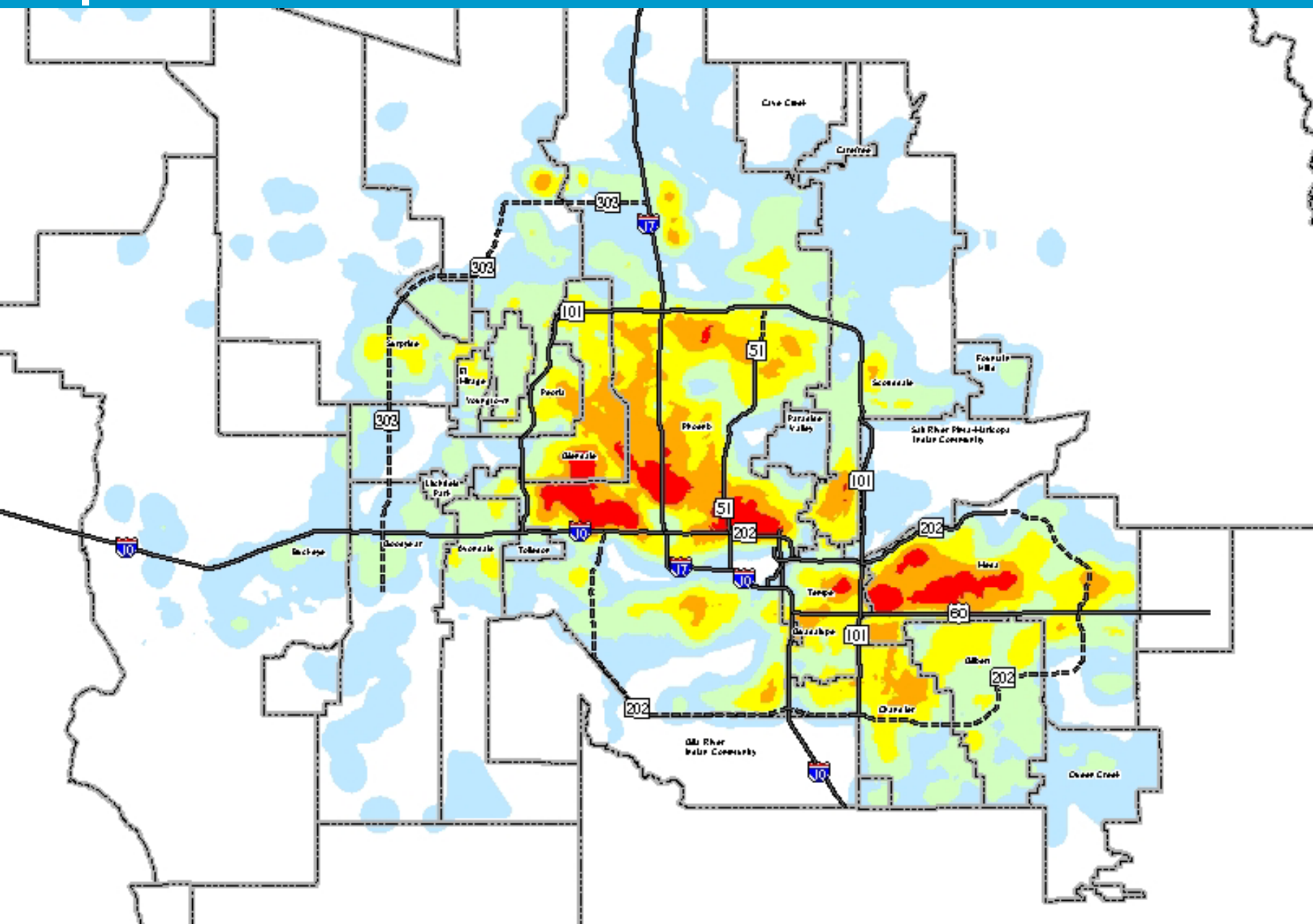


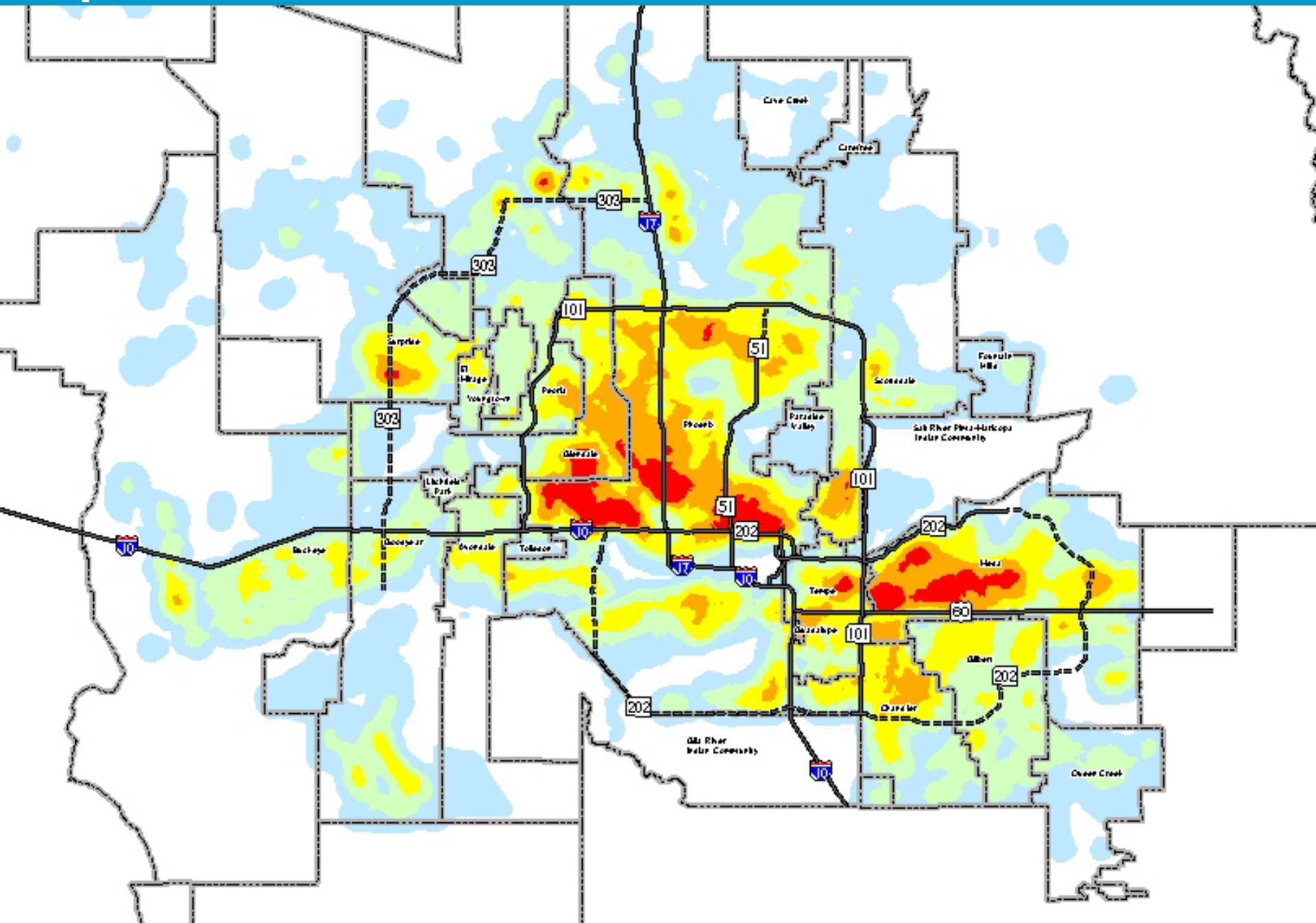




Population Concentration

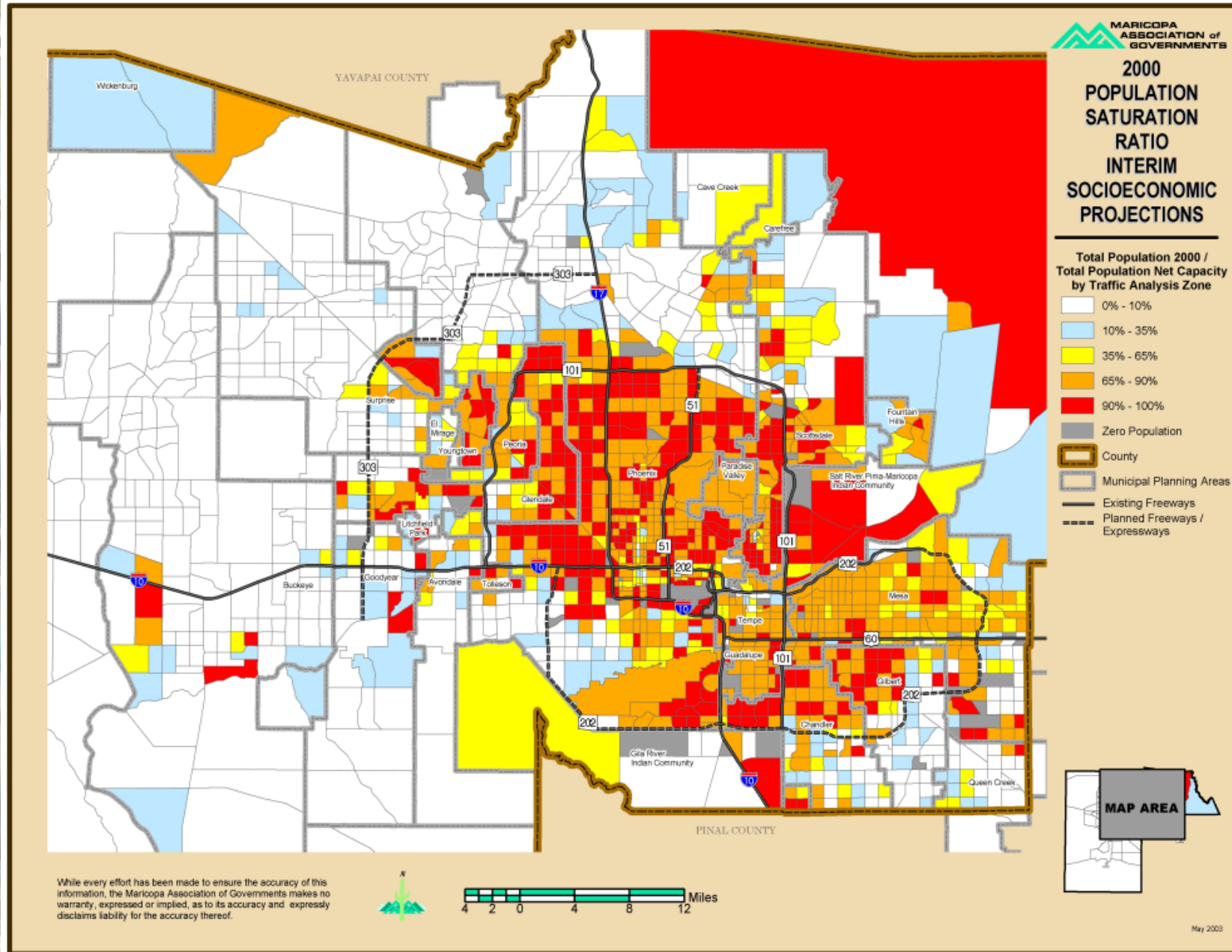
2020





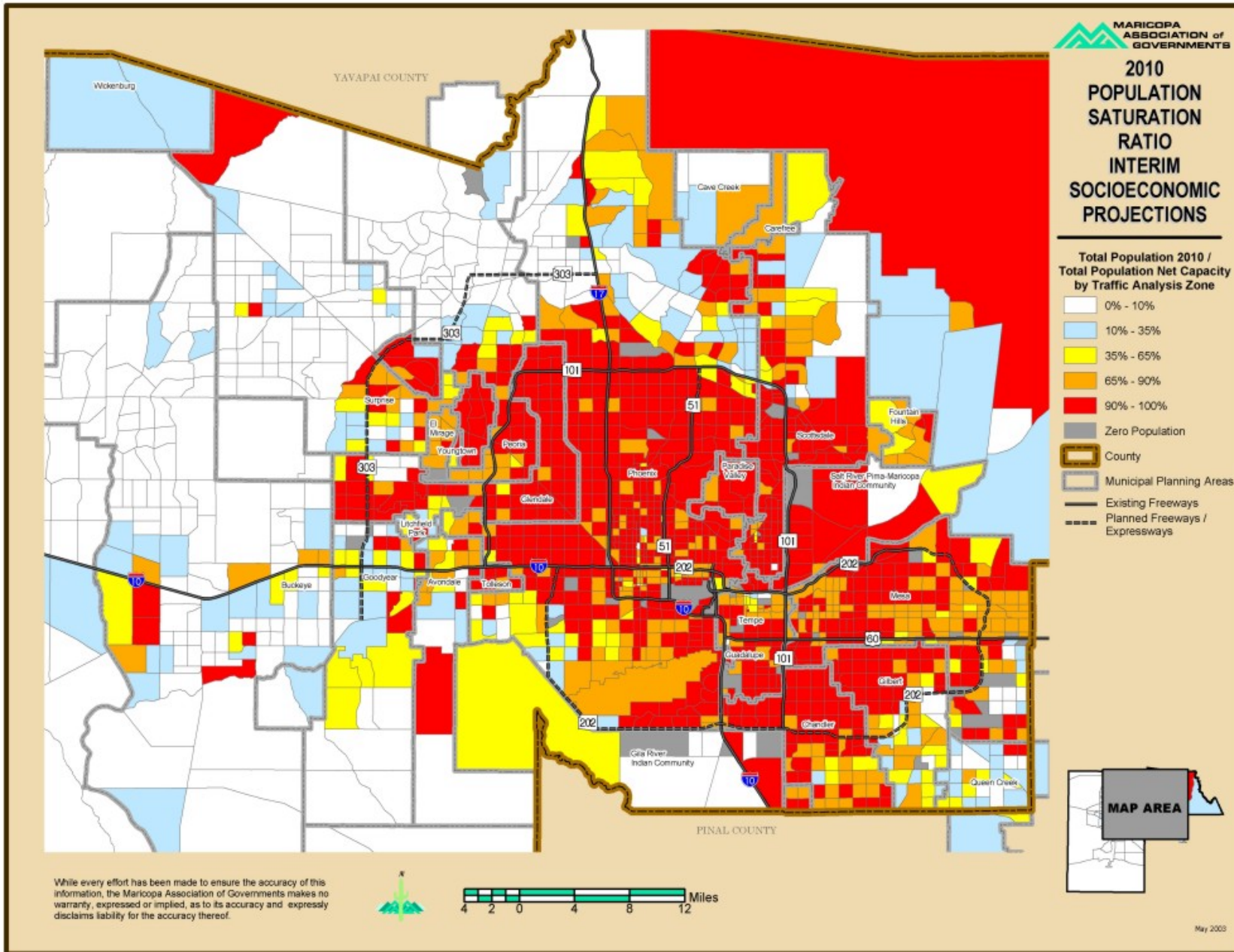
Percent Build-out of Population

2000



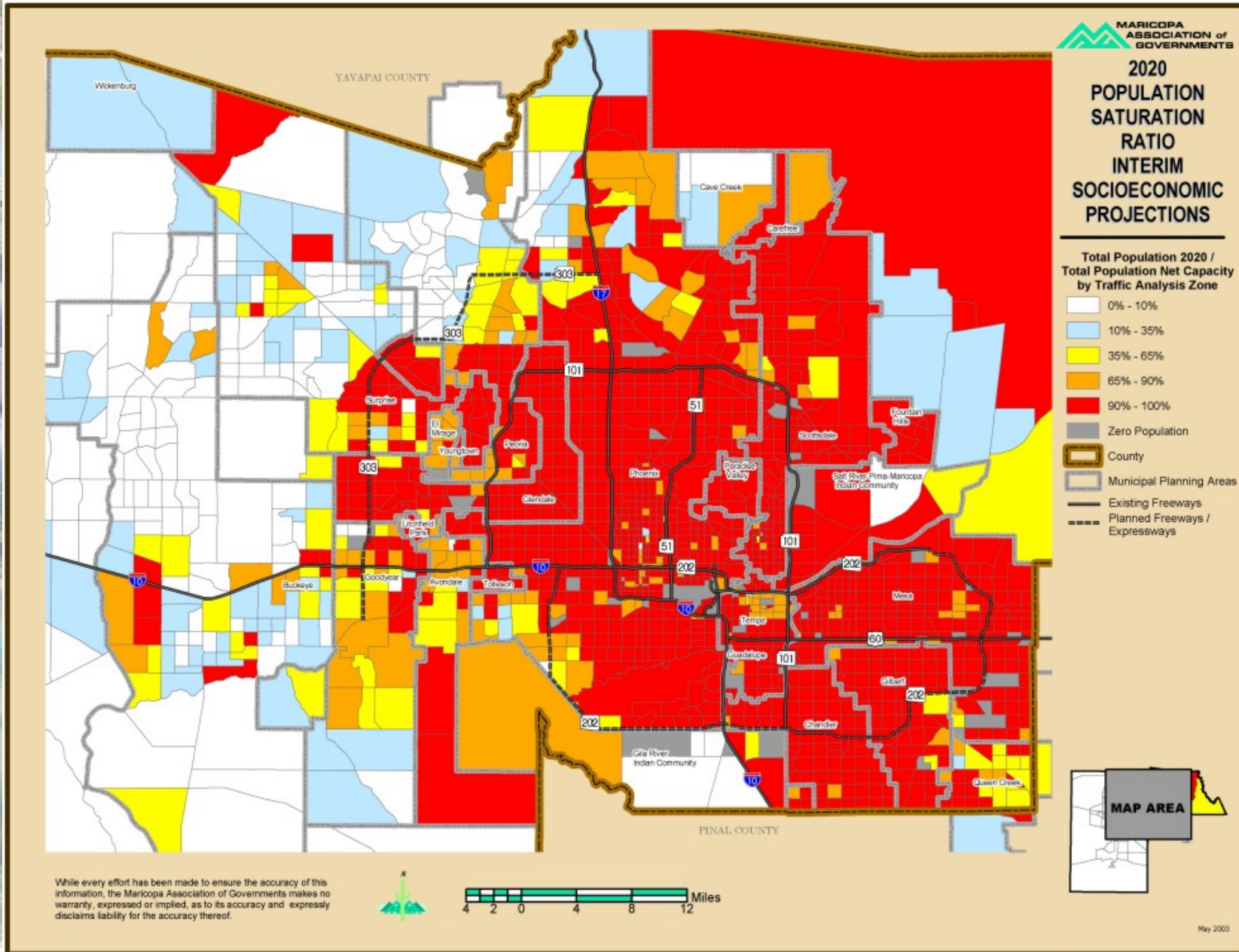
Percent Build-out of Population

2010

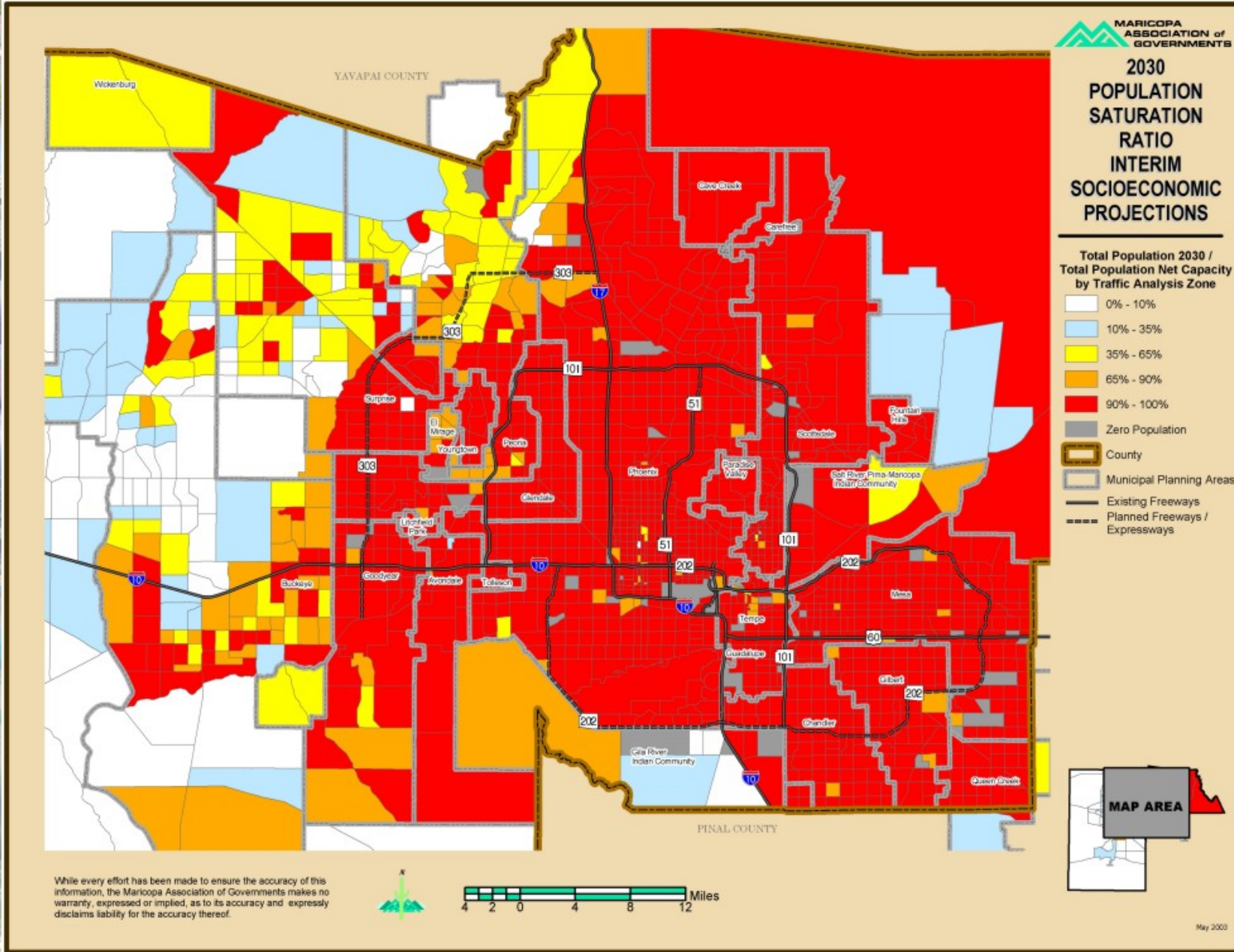


Percent Build-out of Population

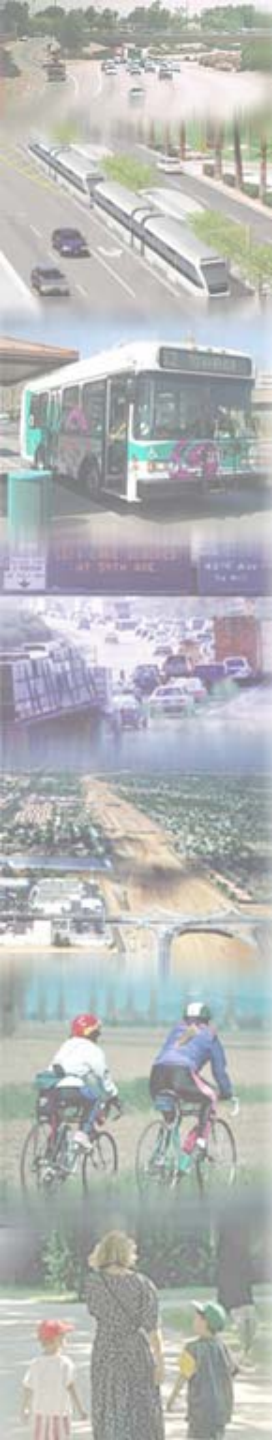
2020



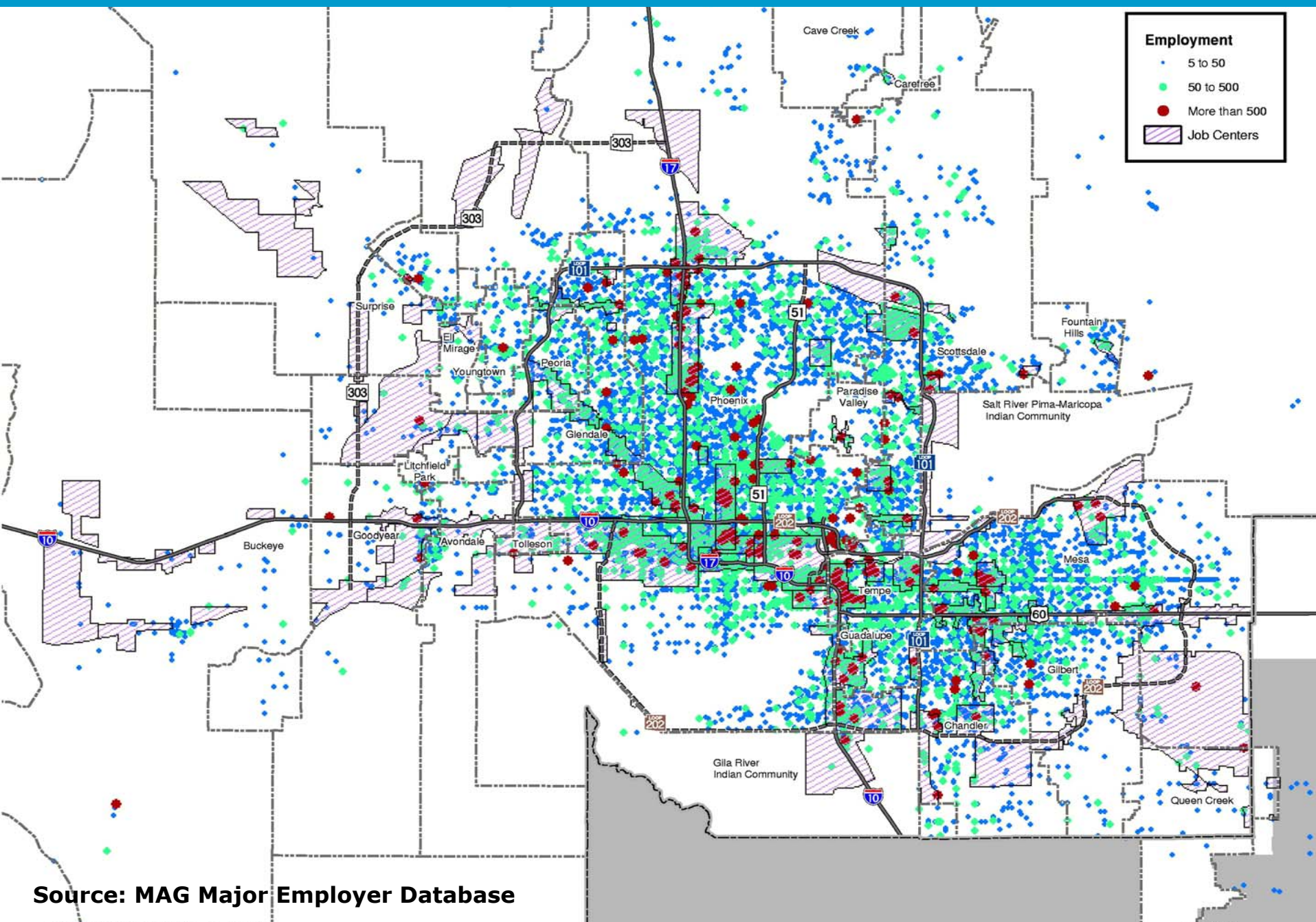
2030



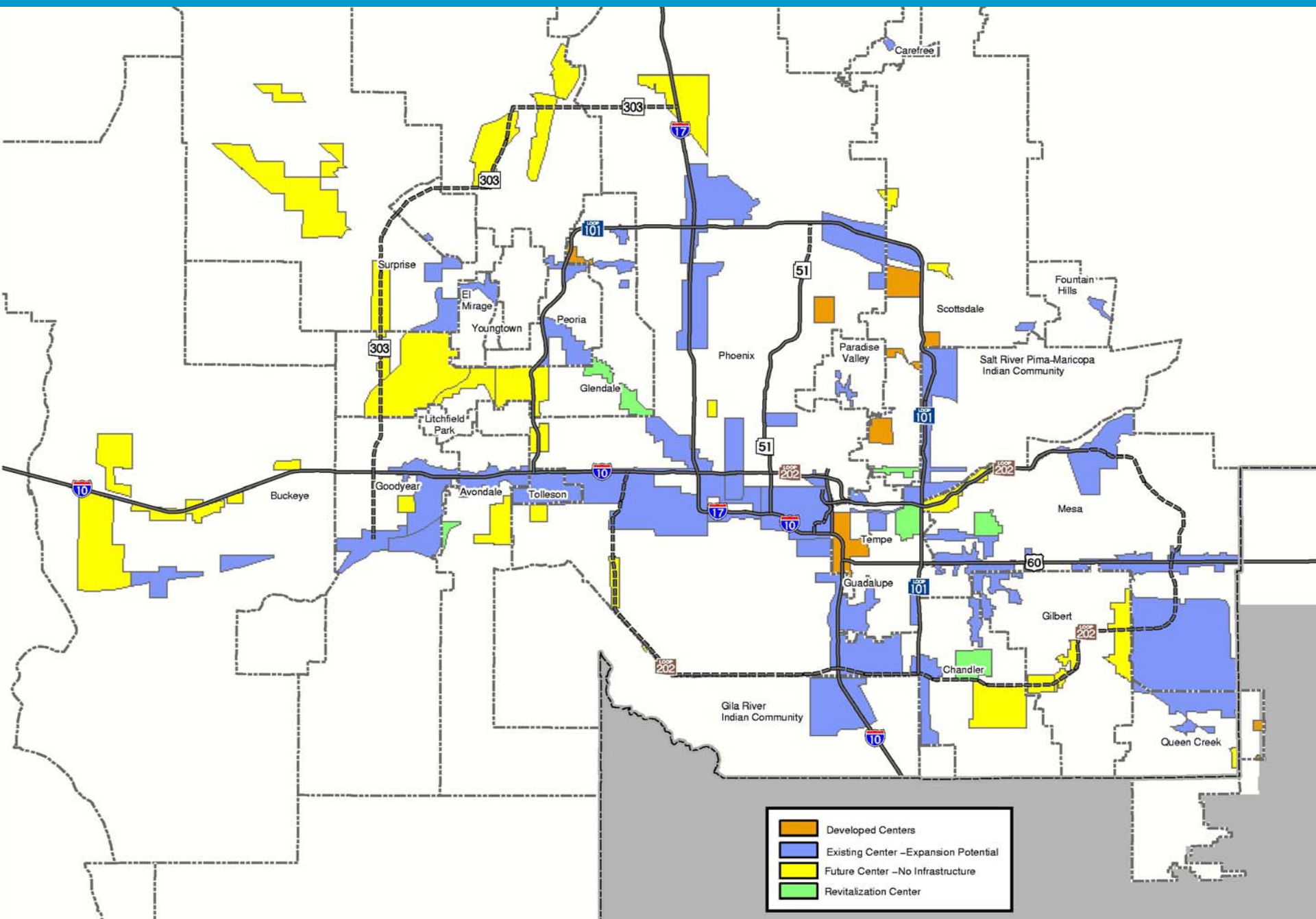
Where are the jobs?



Current Employment Concentrations

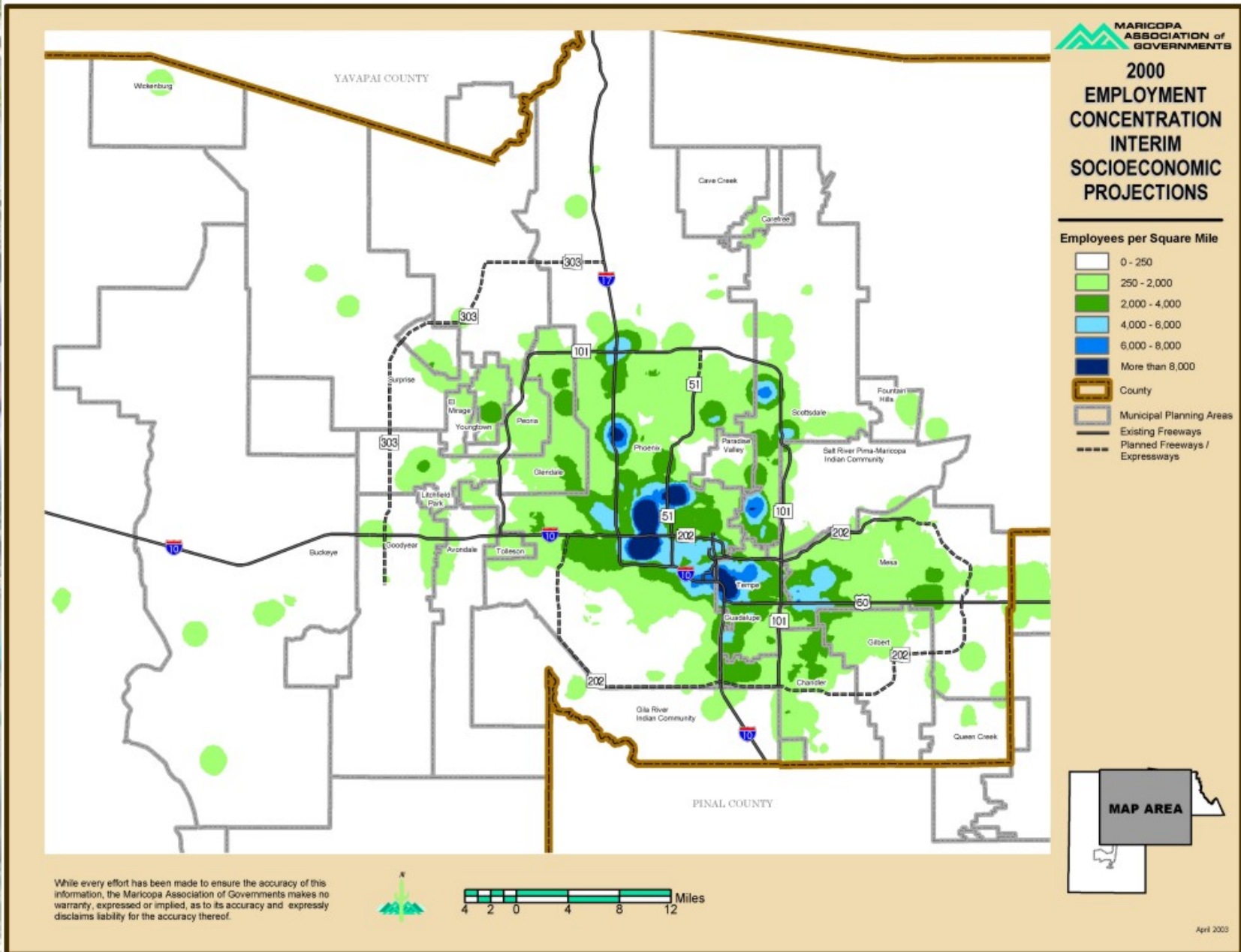


Current and Future Job Centers



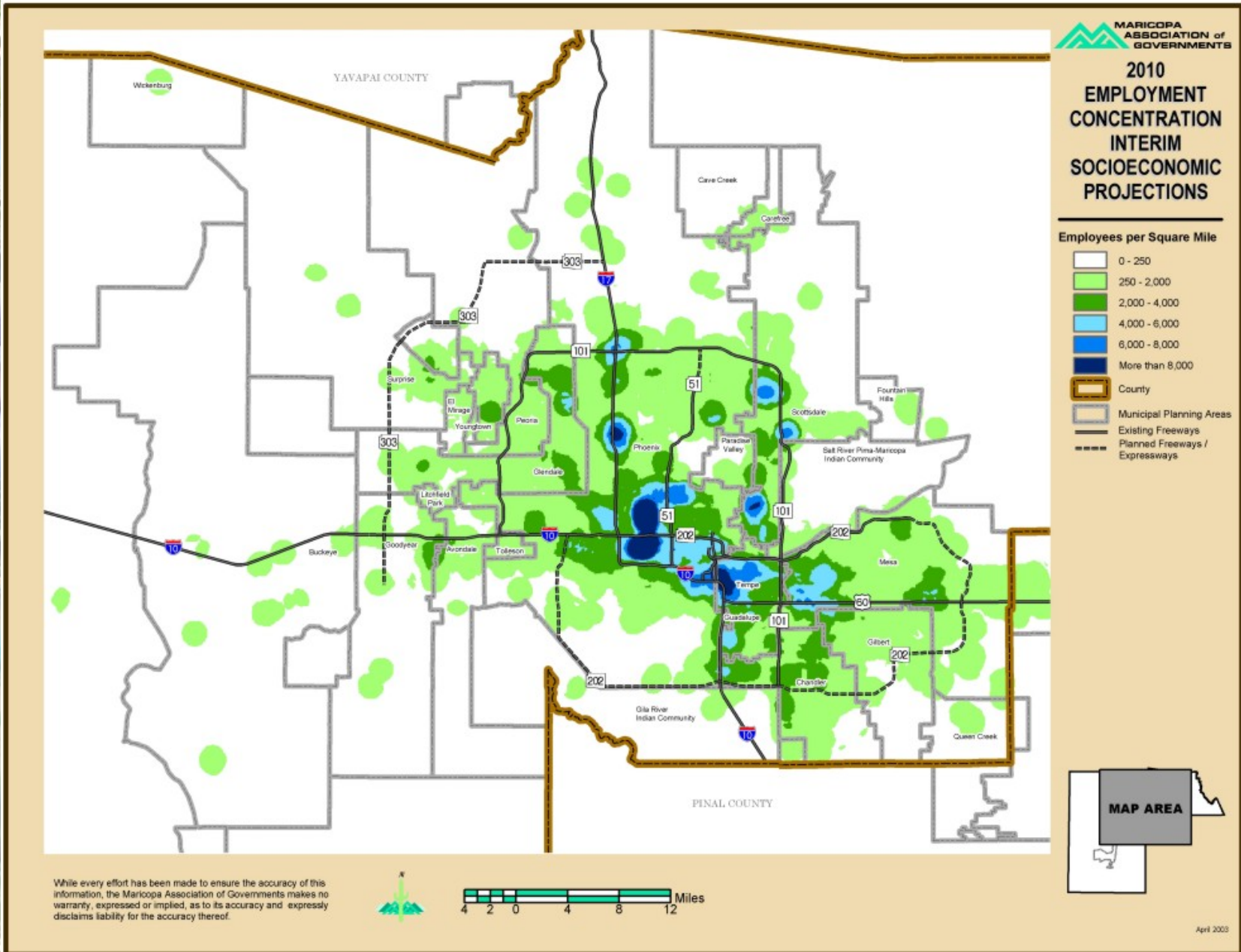
Employment Density

2000



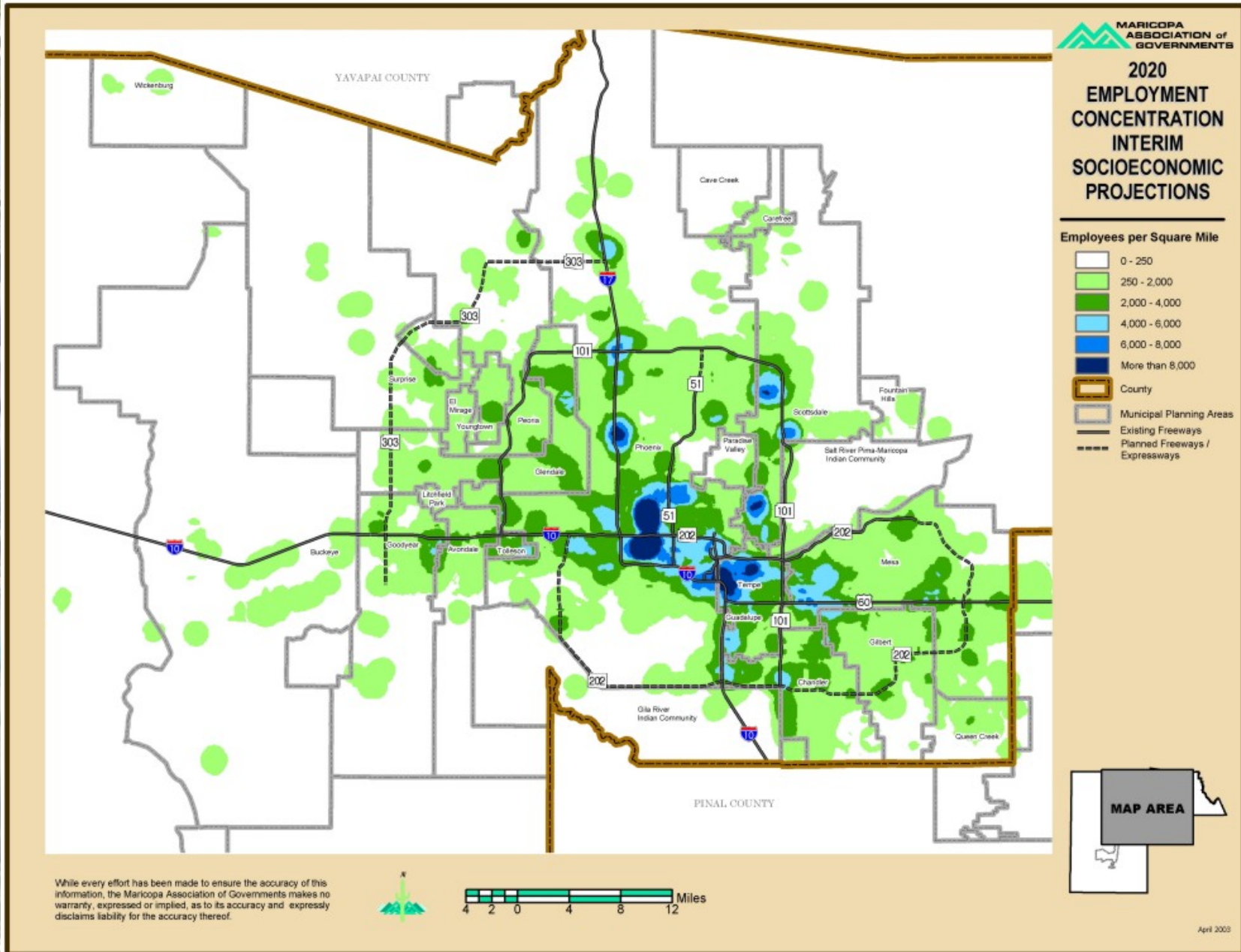
Employment Density

2010

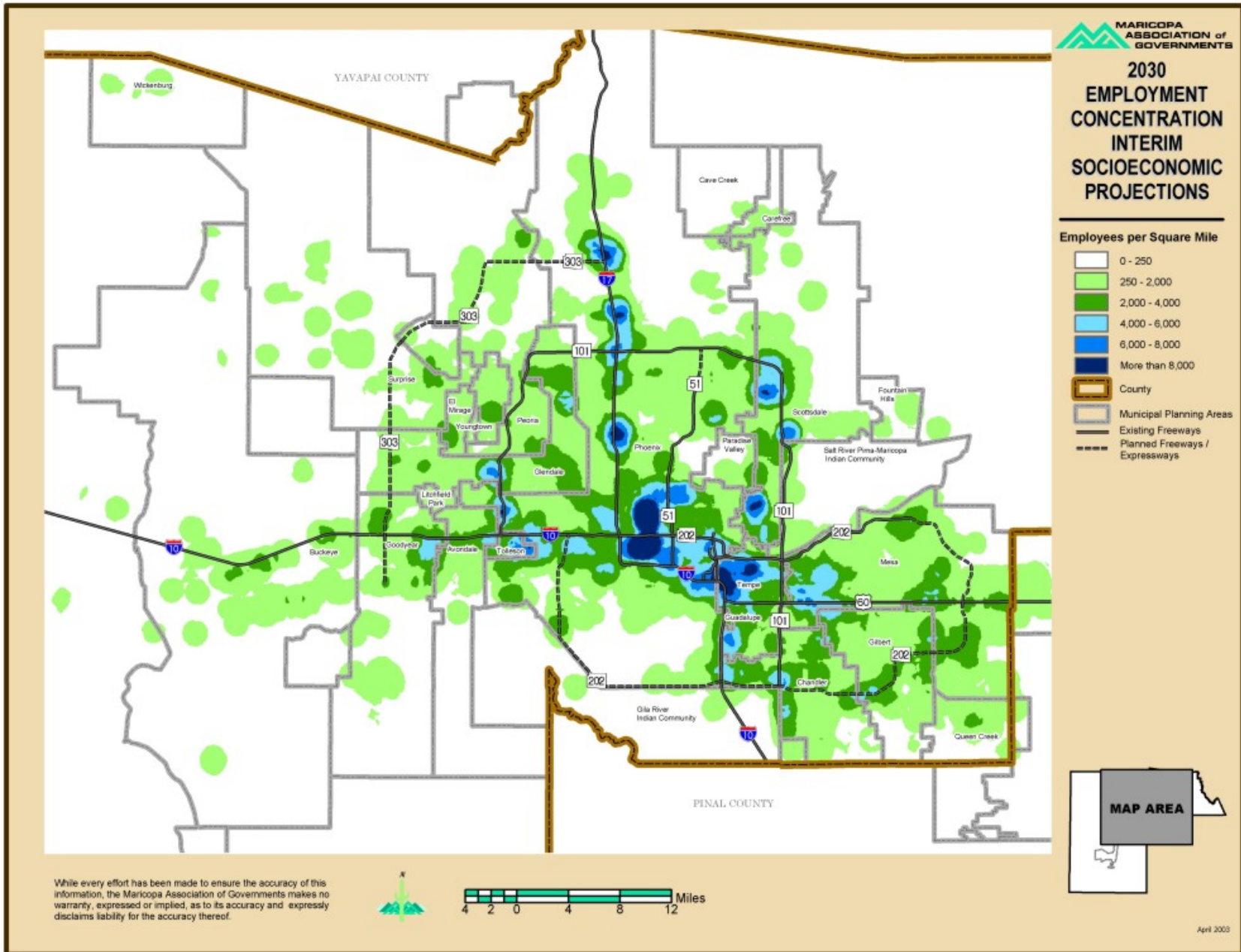


Employment Density

2020

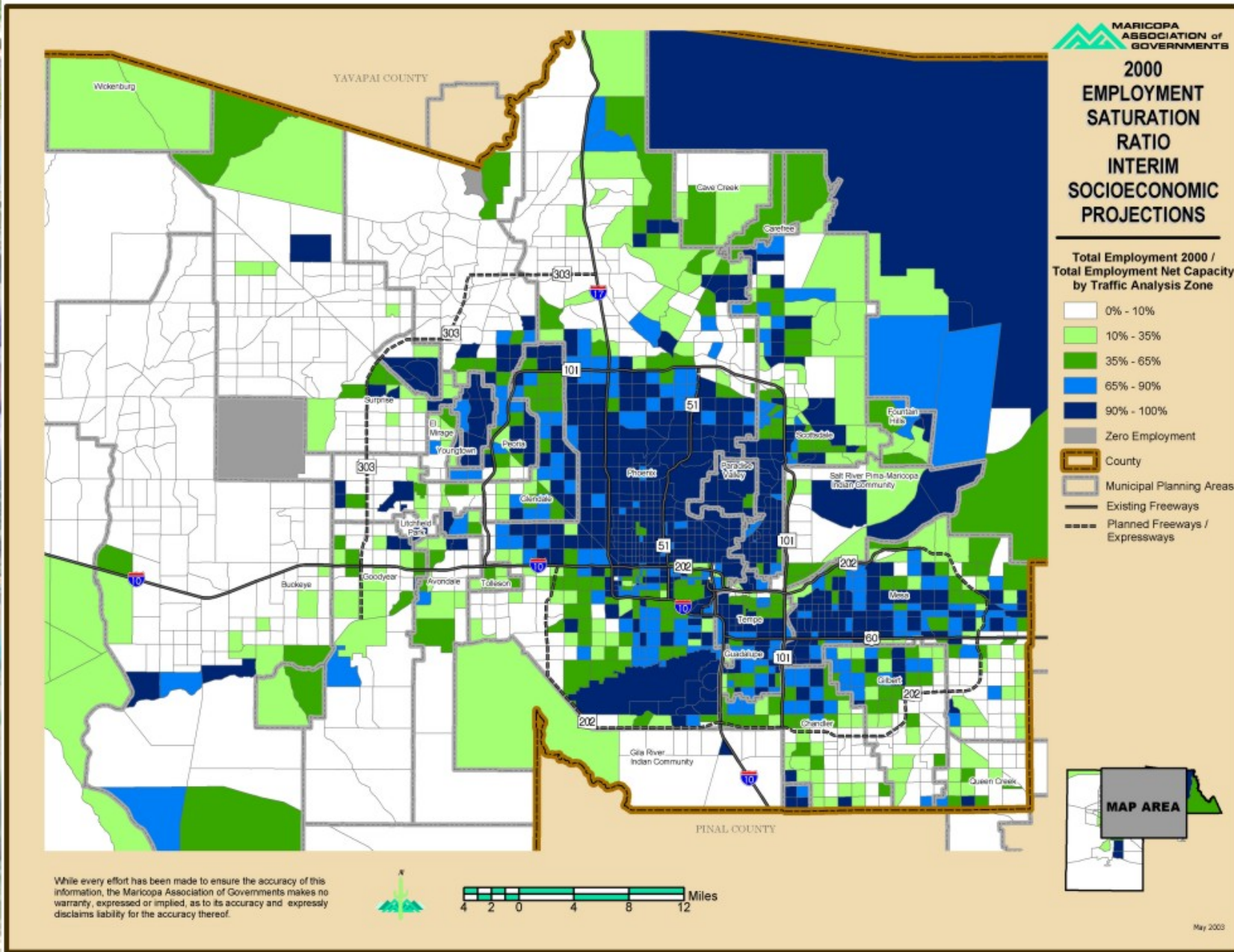


2030



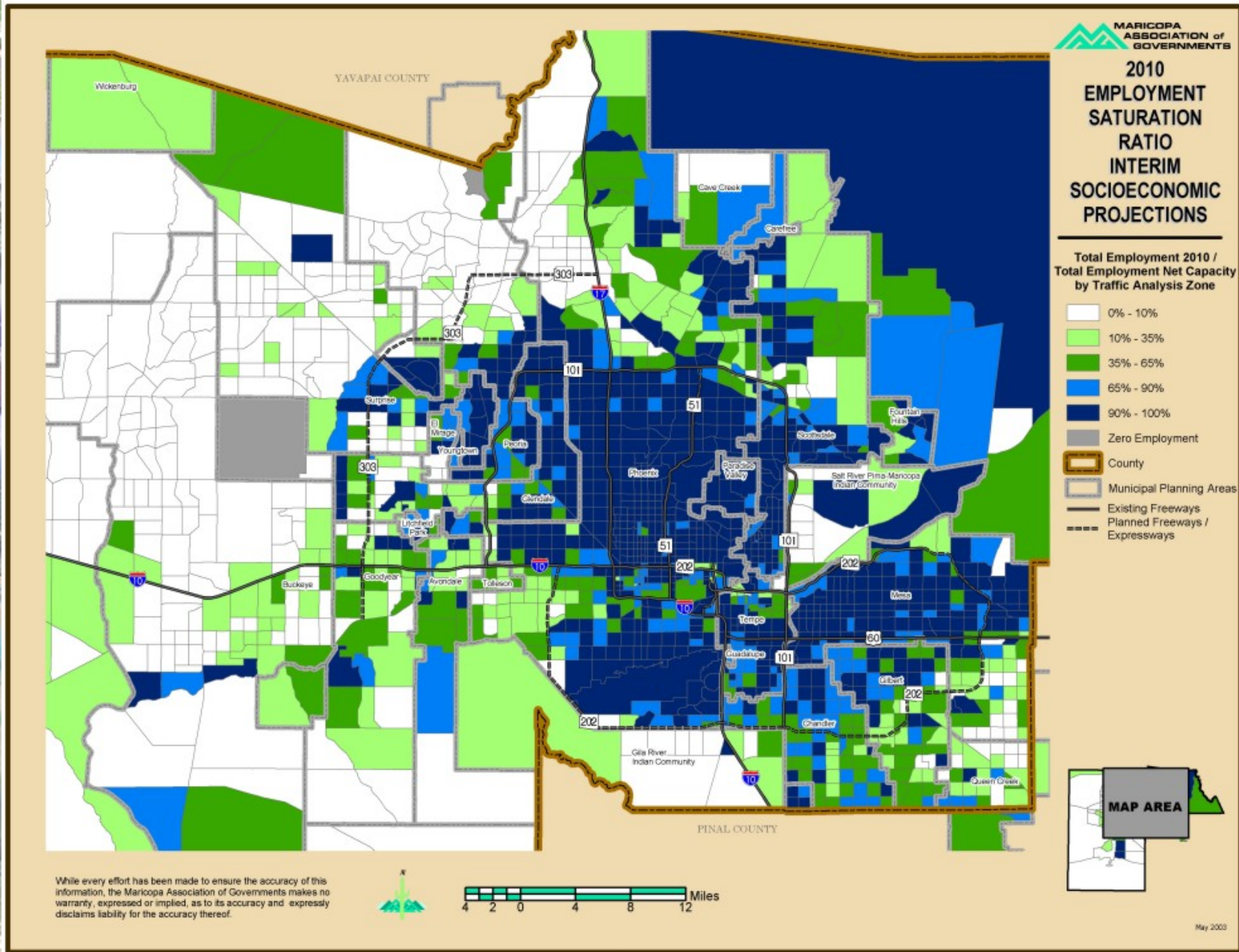
Percent Build-out of Employment

2000

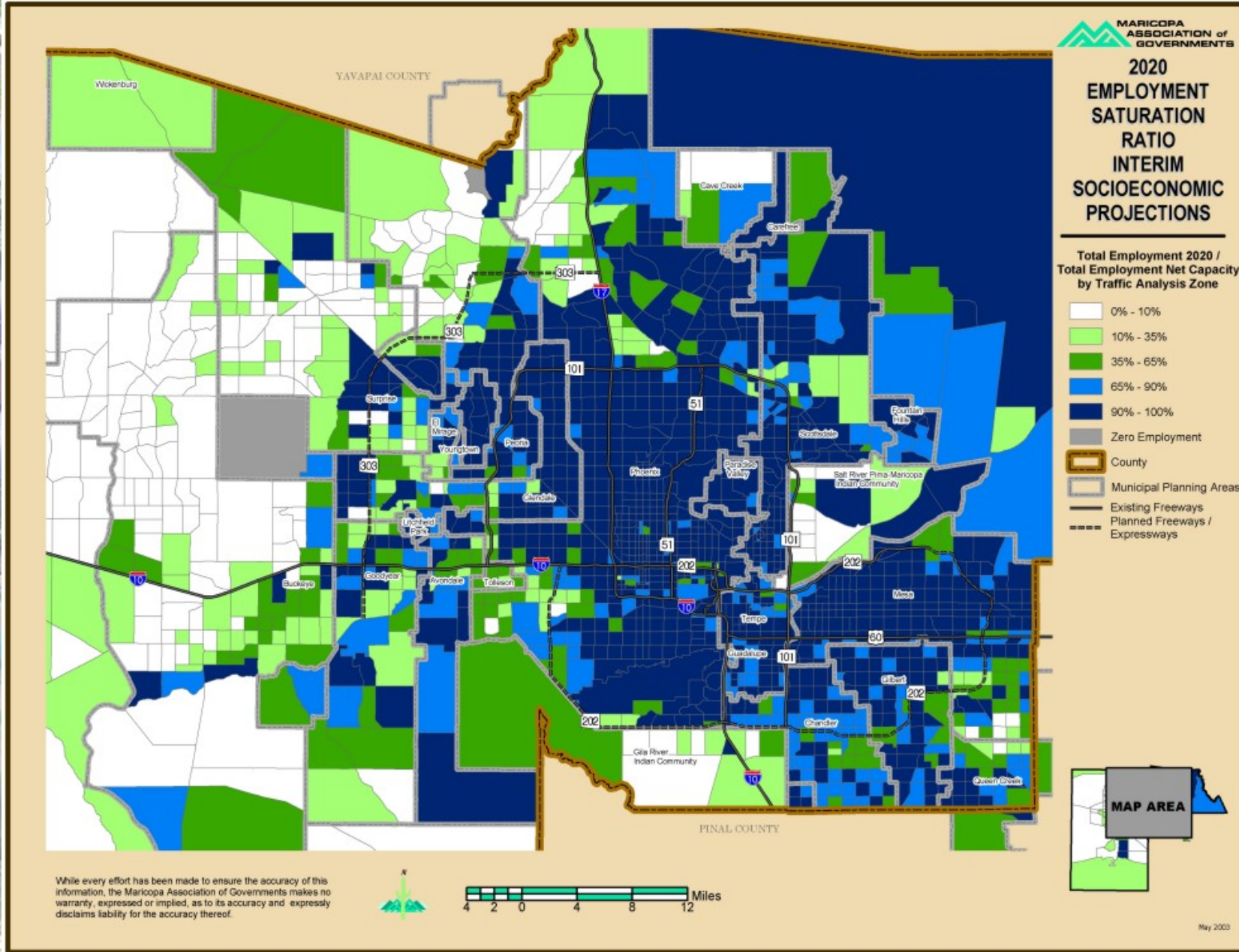


Percent Build-out of Employment

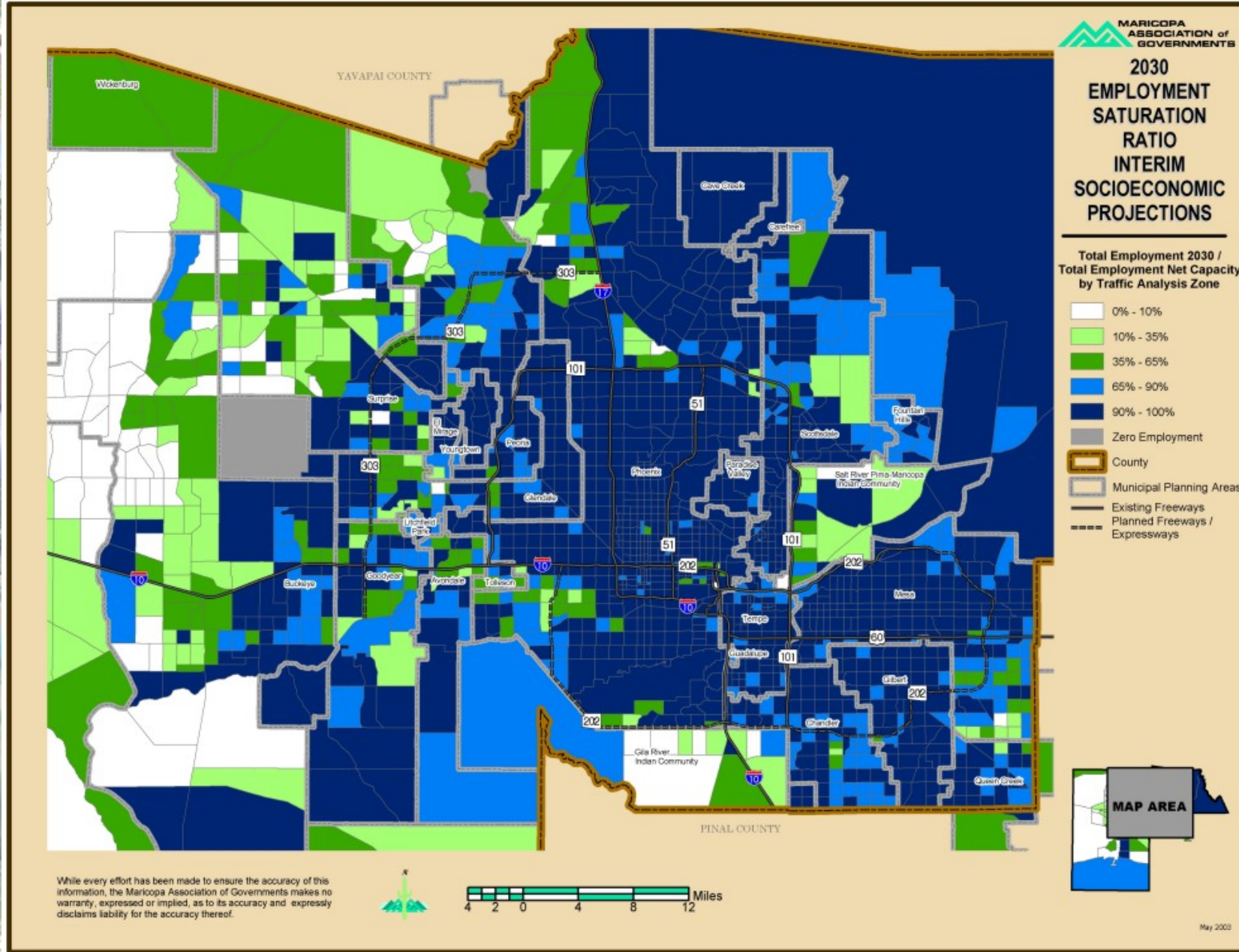
2010



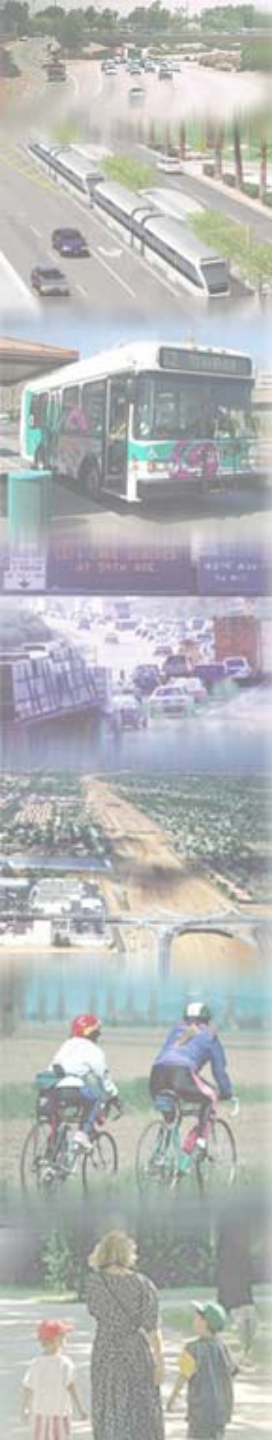
2020

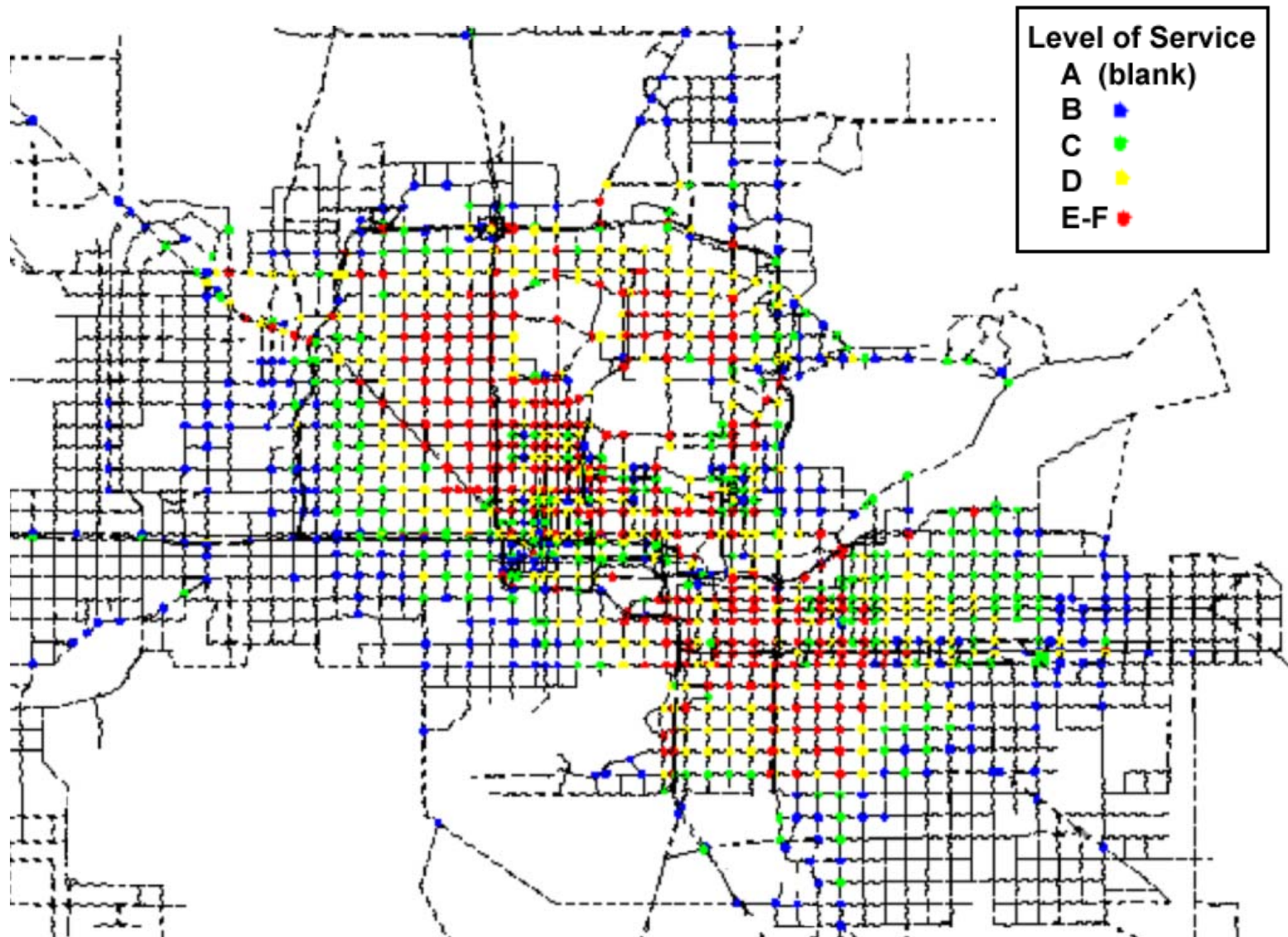


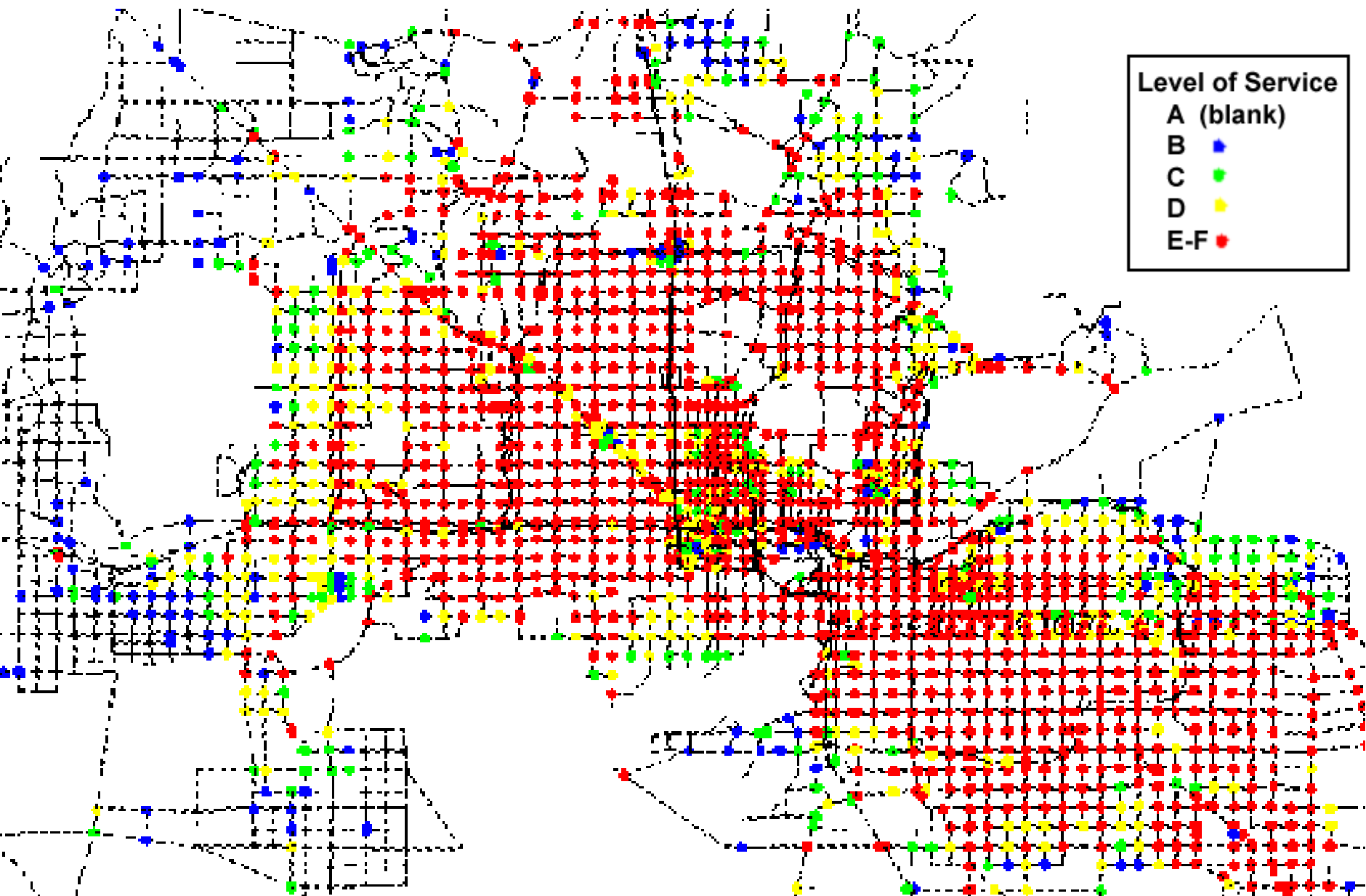
2030

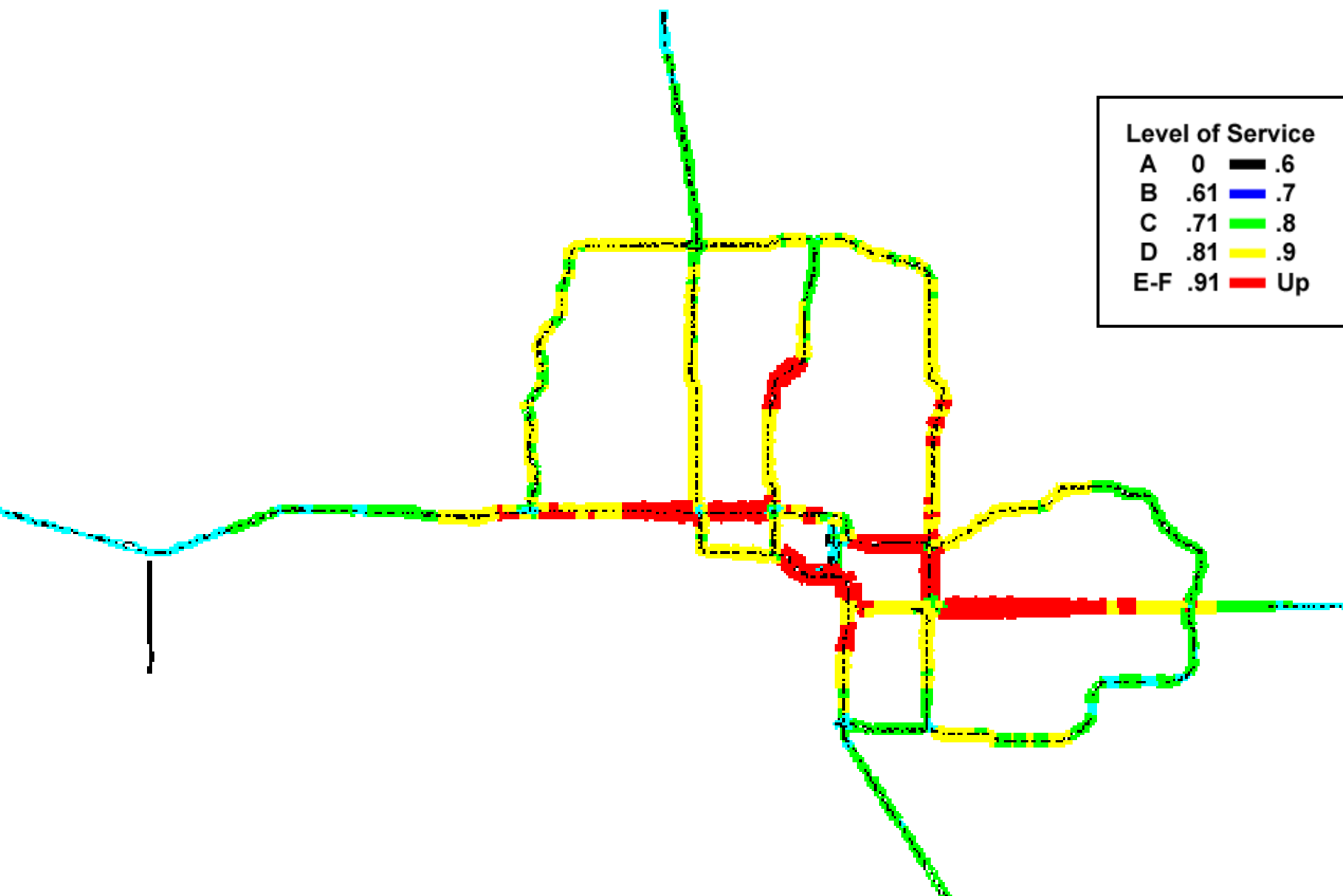


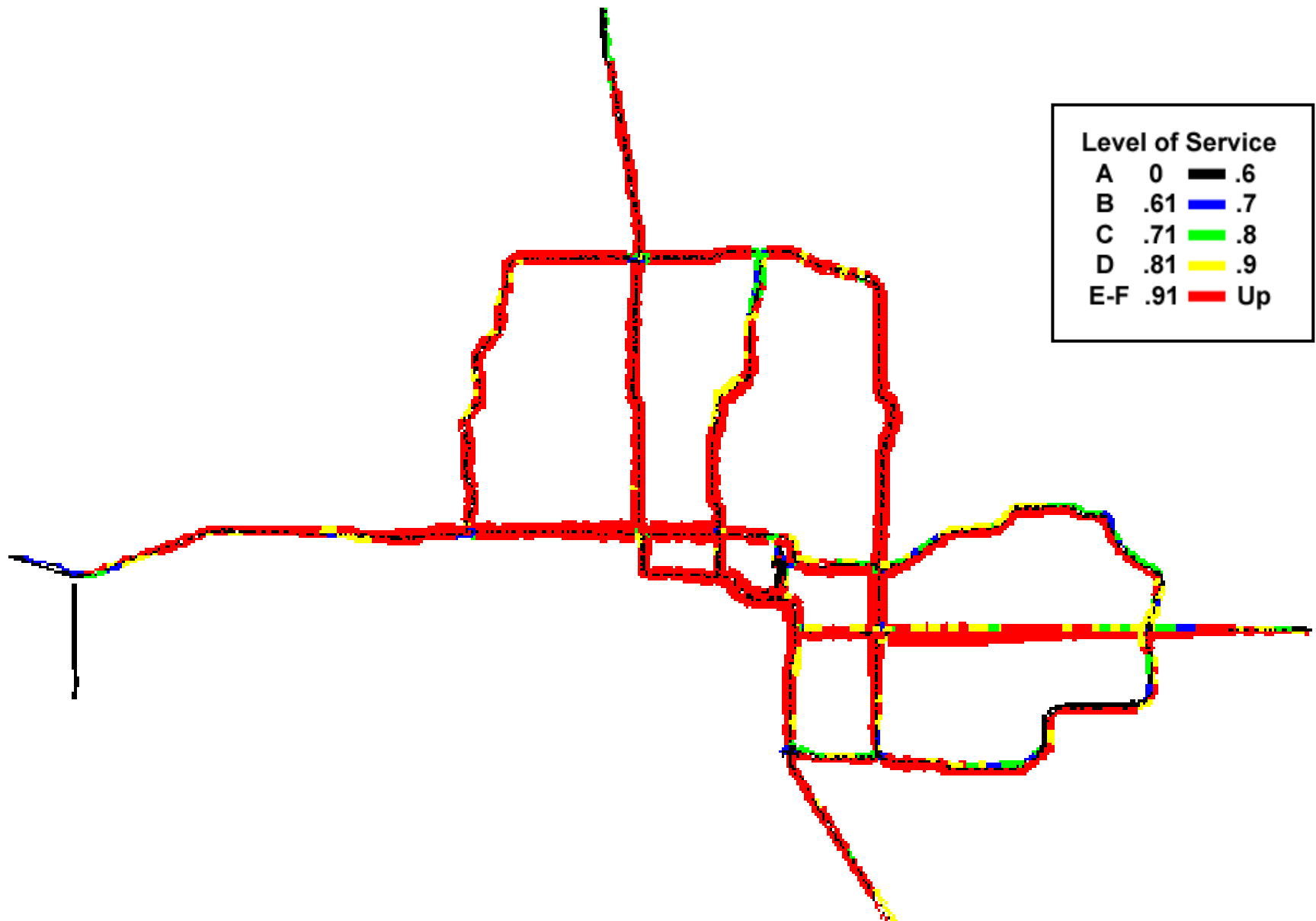
What are the Impacts of Growth on Transportation?













RTP Background Studies

Underway/Just Completed

- MAG High Capacity Transit
- VM/RPTA Regional Transit
- MAG-ADOT HOV/ Value Lanes
- MAG Bottleneck
- Arterial Travel Speed
- MAG NWATS
- MAG SWATS
- MAG-CAAG
SE Maricopa /
N.Pinal ATS
- MAG Grand Ave. NW
- MAG East-West
Mobility

Previously Completed

- MAG Park and Ride, MAG ITS Strategic Plan, MAG ROSS Plan, CANAMEX

MAG High Capacity Transit Study

■ Contact:

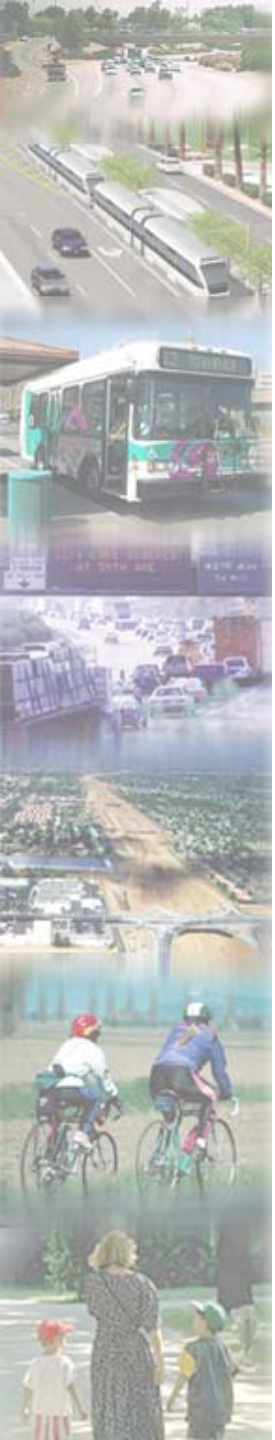
- Dawn Coomer, MAG, (602) 254-6300
- dcoomer@mag.maricopa.gov

■ Consultant:

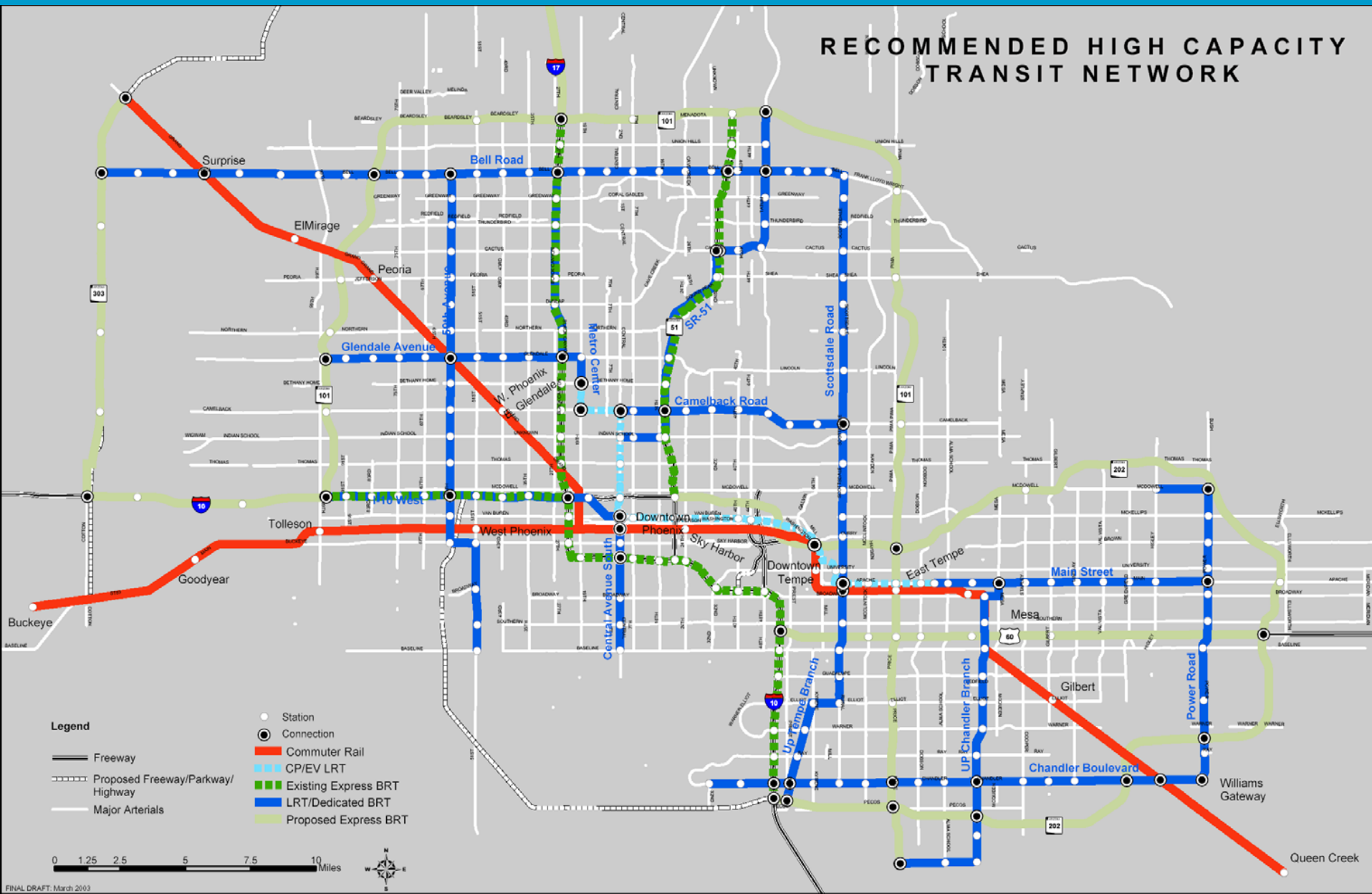
- Steve Schiboula, IBI Group,
(949) 833-5588
- sschiboula@ibigroup.com

■ Current Focus:

- Alternatives Analysis & HCT Recommendations
- Draft 2 Socioeconomic Data



Recommended High Capacity Transit Network (BRT/LRT corridors not alignment specific)





Valley Metro/RPTA Regional Transit System Study

■ Contact:

- Stuart Boggs, RPTA, (602) 534-5474
- sboggs@valleymetro.org

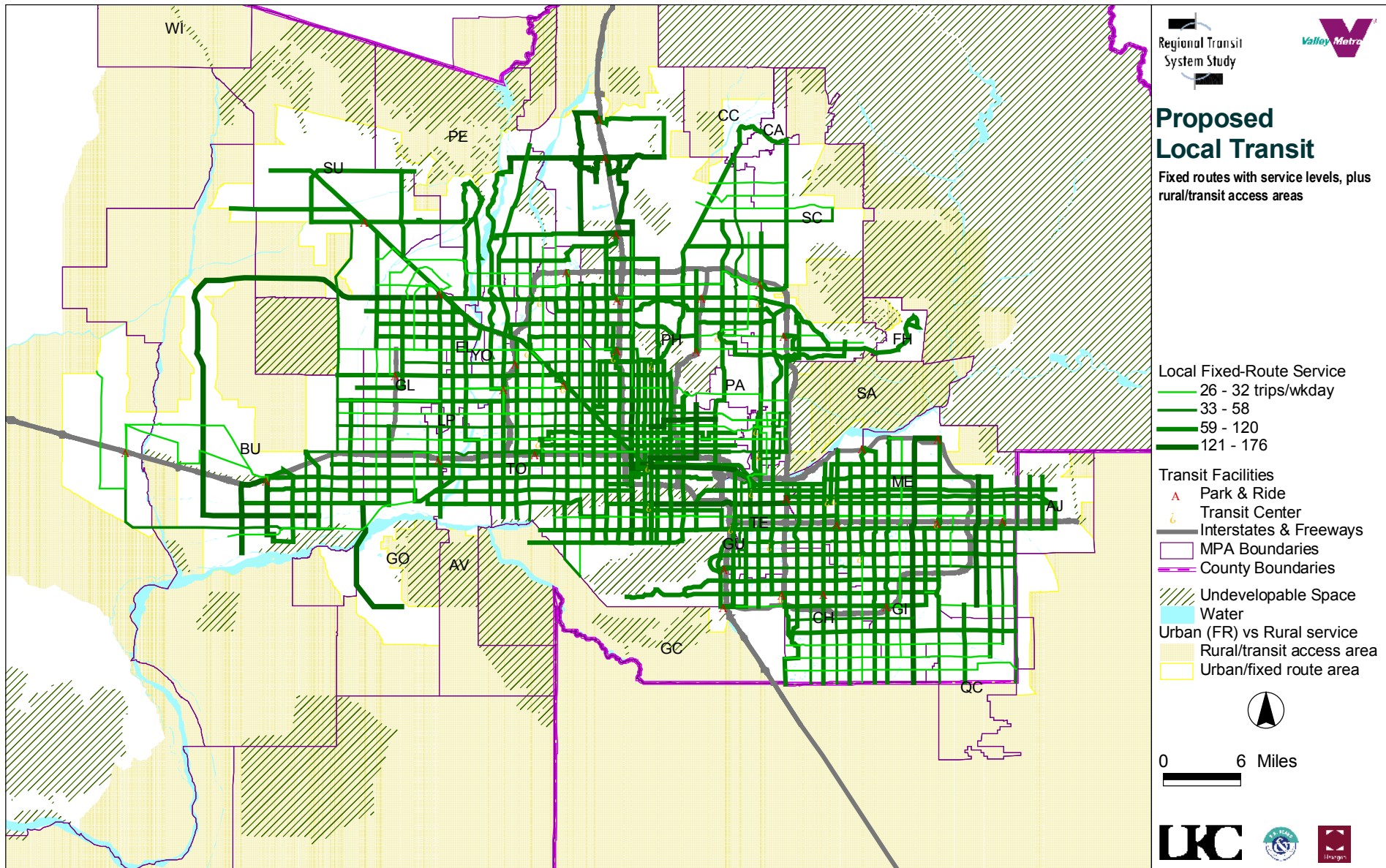
■ Consultant:

- Linda Cherrington, LKC Inc.,
(713) 522-2554
- linda@lkcinc.com

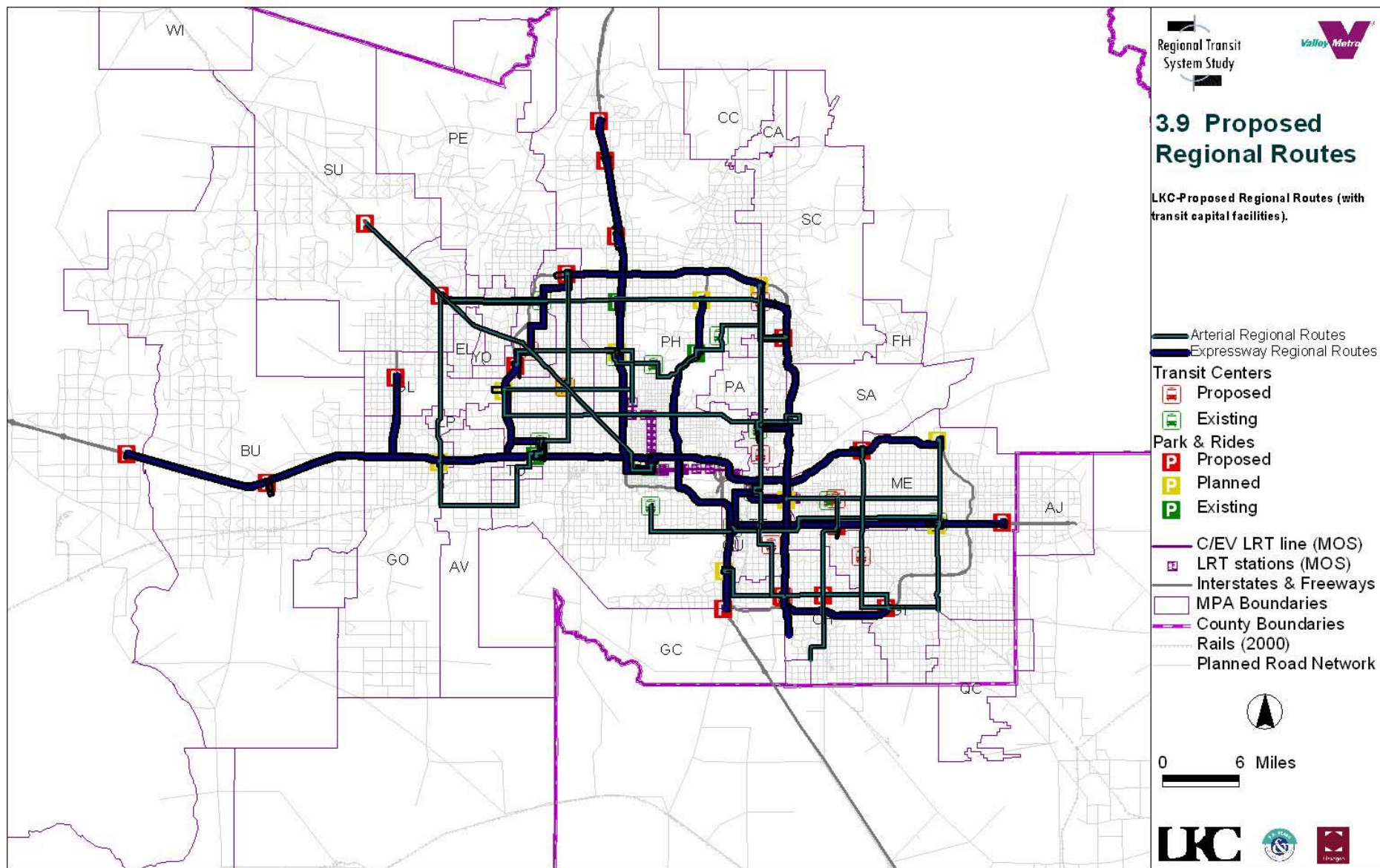
■ Current Status:

- Alternatives Analysis, Costing & RTS Recommendations
- Fixed Route, Paratransit, Rural, Vanpool Focus (No HCT)

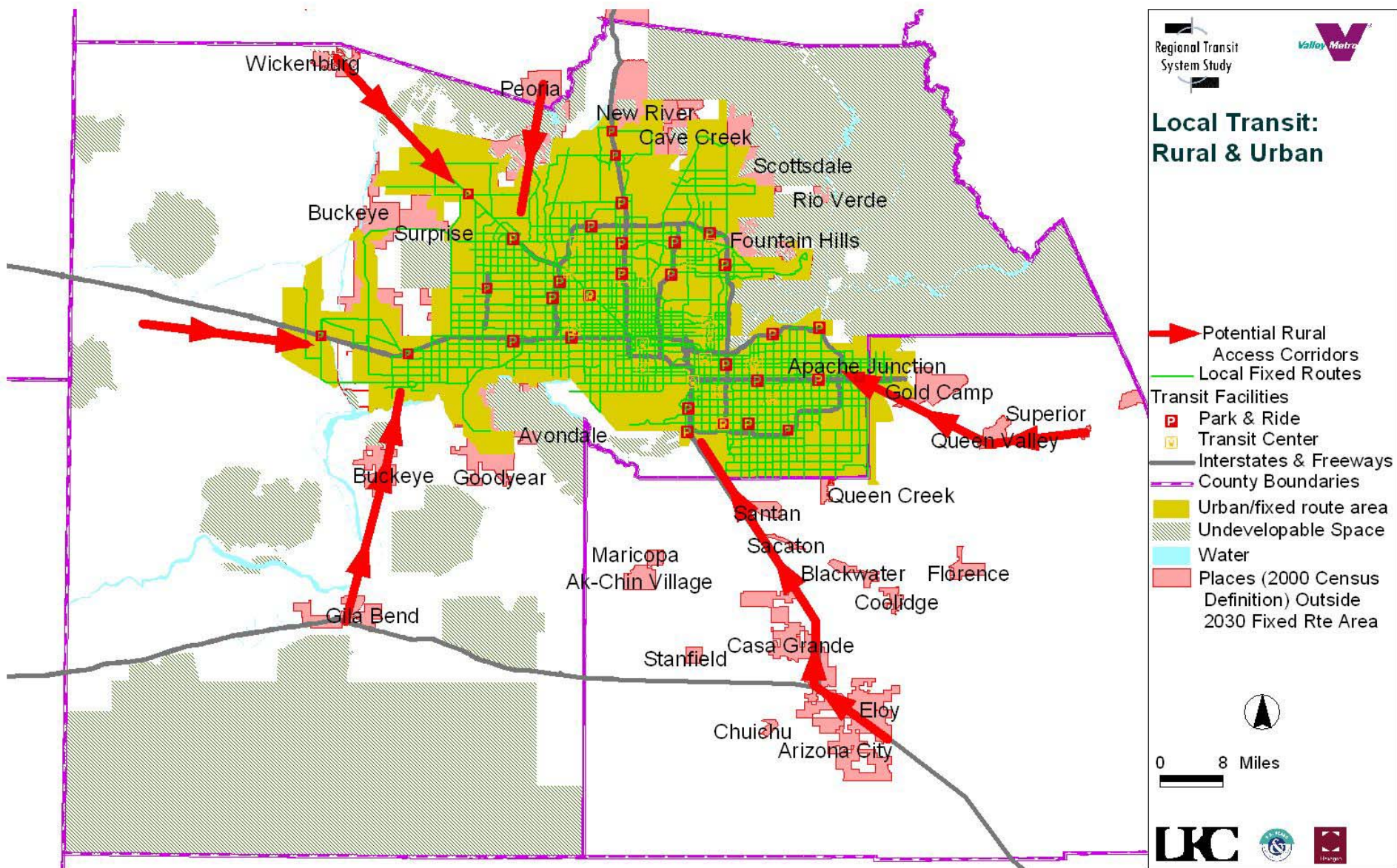
Local Bus Network



Proposed Regional Connections



Rural Transit Access





Dial-a-Ride Services

- Two-Tier Dial-a-Ride Services
 - ADA complementary paratransit
 - Seniors/Disabled Services
- Demand
 - Estimate eligible population within the Region
 - Estimate trip requirements per patron/Project number of trips required
- Supply
 - Document current productivity ratio
 - Estimate revenue hours





MAG-ADOT Value Lanes Study

■ Contact:

- Mark Schlappi, MAG, (602) 254-6300
- mschlappi@mag.maricopa.gov
- Bill Hayden, ADOT, (602) 712-7524
- whayden@dot.state.az.us

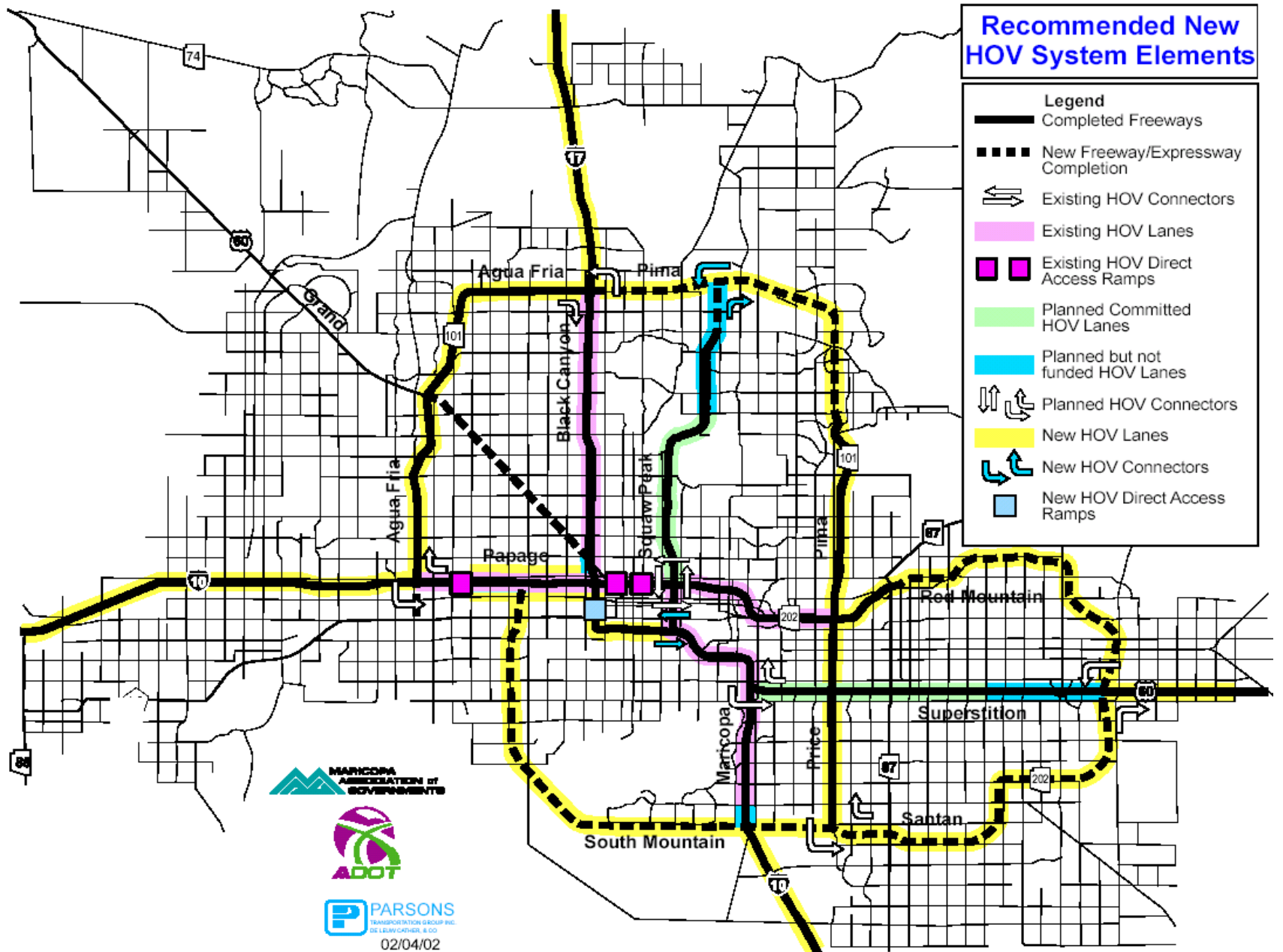
■ Consultant:

- Parsons Transportation Group

■ Current Status:

- Complete
- Pilot HOT Lane recommended (I-10 west)

Recommended New HOV System Elements



02/04/02



MAG Bottleneck Study

■ Contact:

- Mark Schlappi, MAG, (602) 254-6300
- mschlappi@mag.maricopa.gov

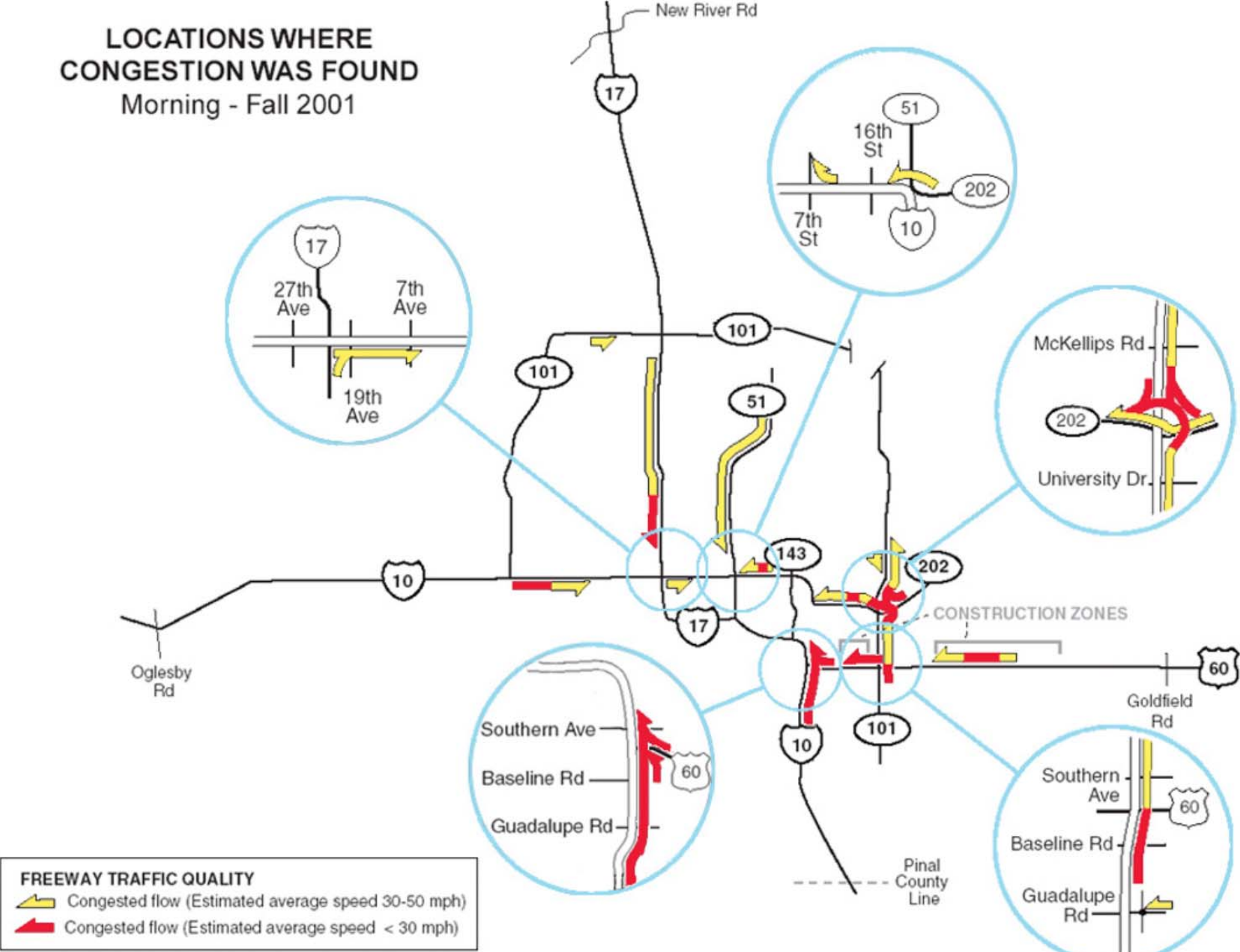
■ Consultant:

- Mike Connors, HDR, (602) 508-6600
- Mconnors@hdrinc.com

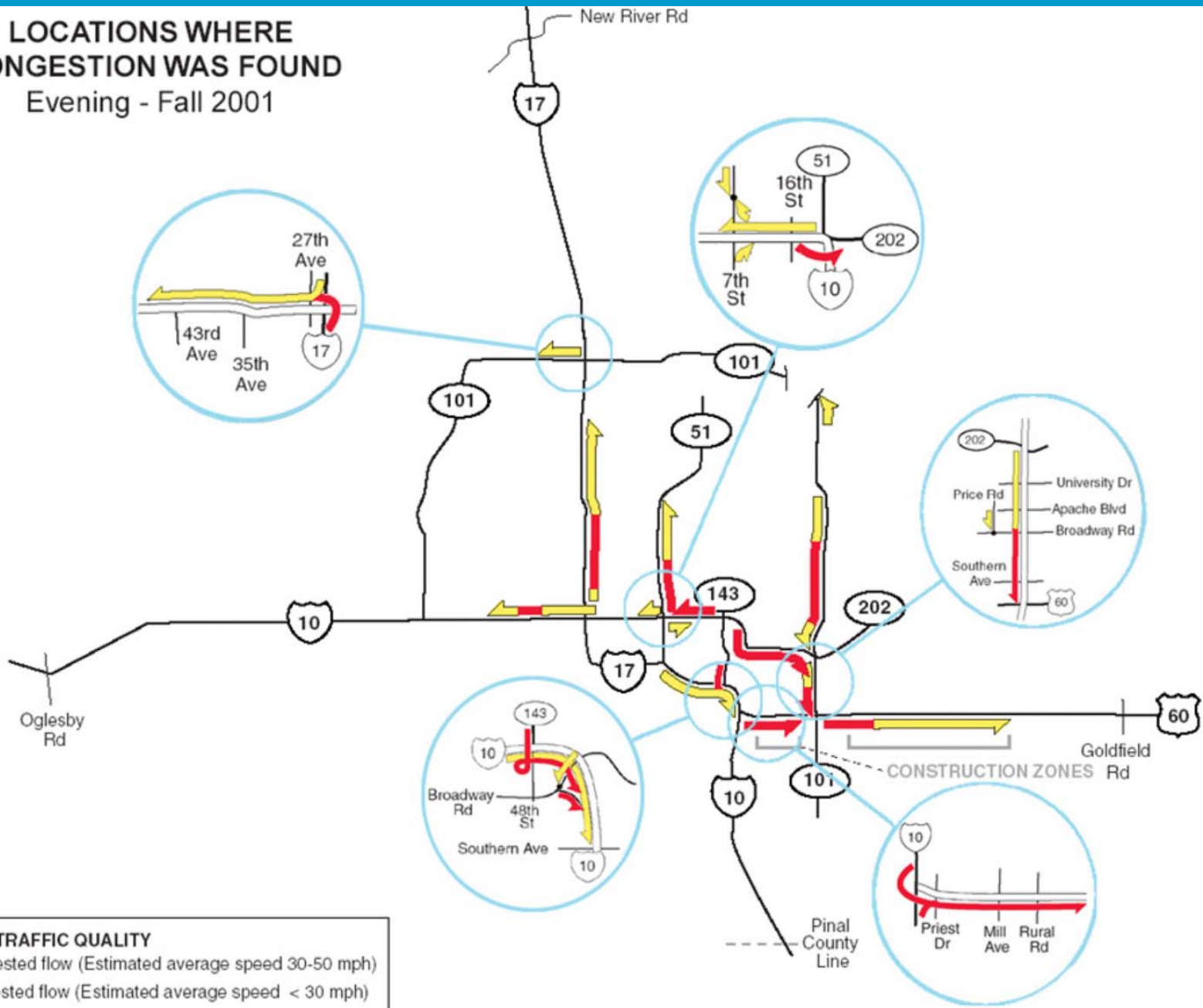
■ Current Focus:

- Bottleneck & potential capacity improvements under review
- Modeling alternatives

**LOCATIONS WHERE
CONGESTION WAS FOUND**
Morning - Fall 2001



LOCATIONS WHERE CONGESTION WAS FOUND Evening - Fall 2001





MAG Northwest Area Transportation Study

(NWATS)

■ Contact:

- Chris Voigt, MAG, (602) 254-6300
- cvoigt@mag.maricopa.gov

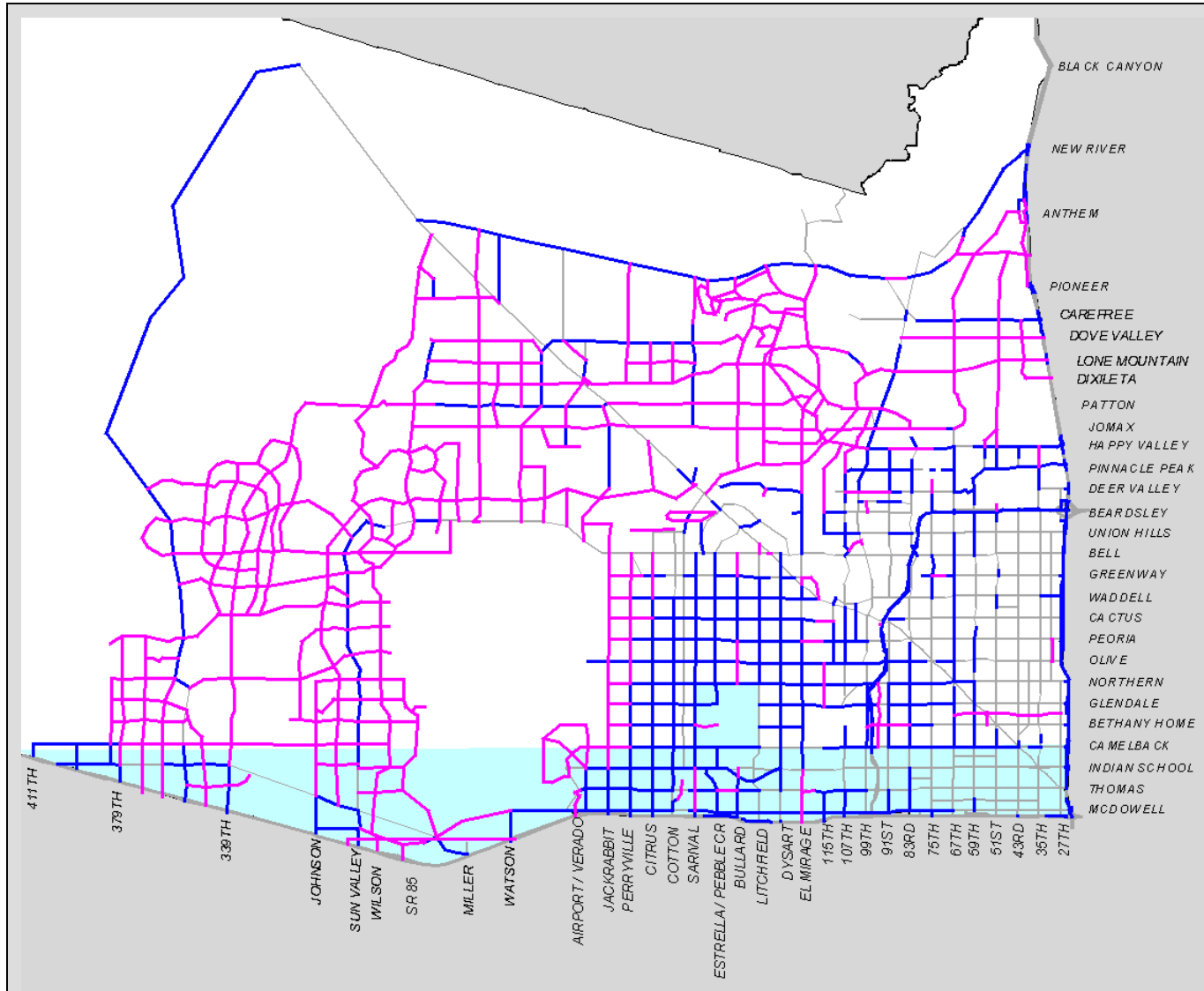
■ Consultant:

- Steve Hogan, Parsons Brinckerhoff,
(480) 921-6867
- Hogan@pbworld.com

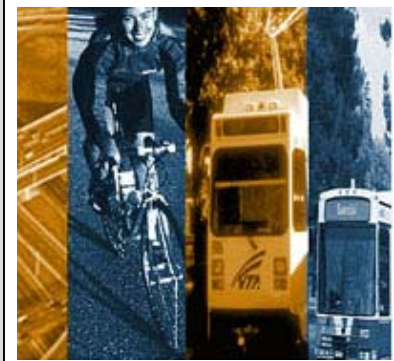
■ Current Focus:

- Alternatives Analysis & Sub-area
Recommendations

Enhanced Network (as modeled)



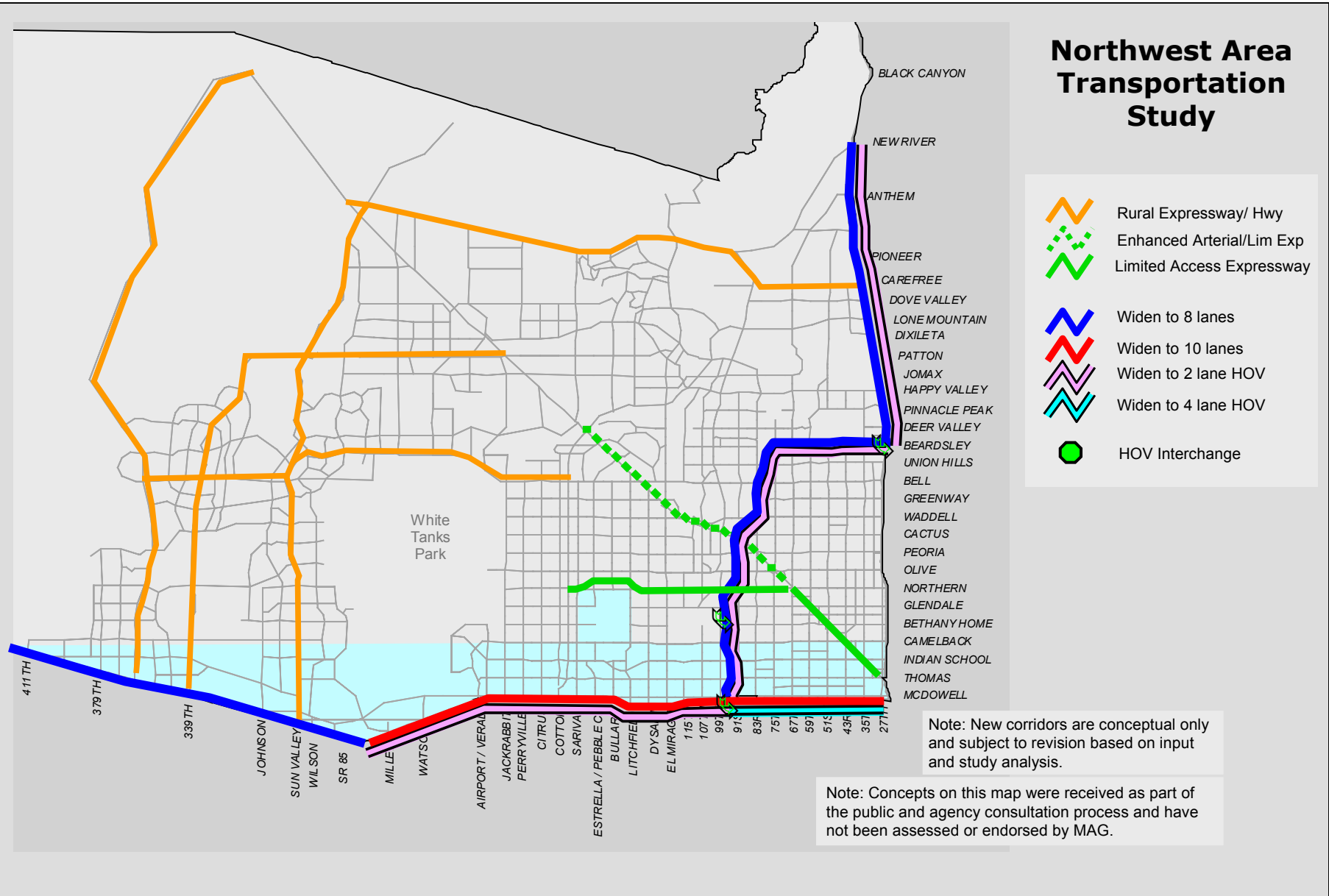
Northwest Area Transportation Study



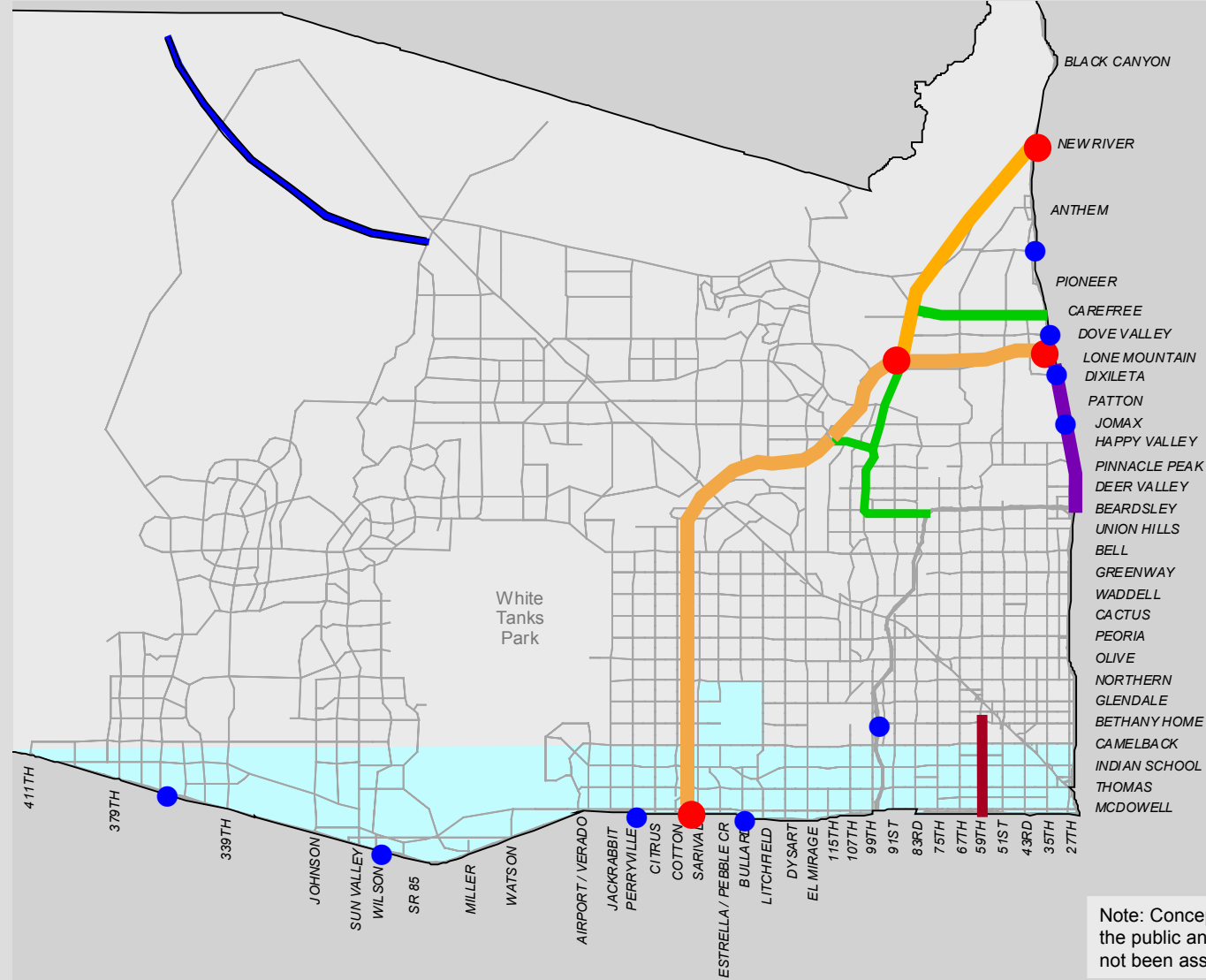
More Lanes
New Link

Draft








Enhanced Highways Network



New Highways Network



Northwest Area Transportation Study

-  Wickenburg Bypass
-  New Freeway
-  6 lane Expressway
-  Enhanced Arterial
-  Widen to 5 + 1
-  New Interchange
-  System Interchange

Note: New corridors are conceptual only and subject to revision based on input and study analysis.

Note: Concepts on this map were received as part of the public and agency consultation process and have not been assessed or endorsed by MAG.



MAG Southwest Area Transportation Study

(SWATS)

■ Contact:

- Chris Voigt, MAG, (602) 254-6300
- cvoigt@mag.maricopa.gov

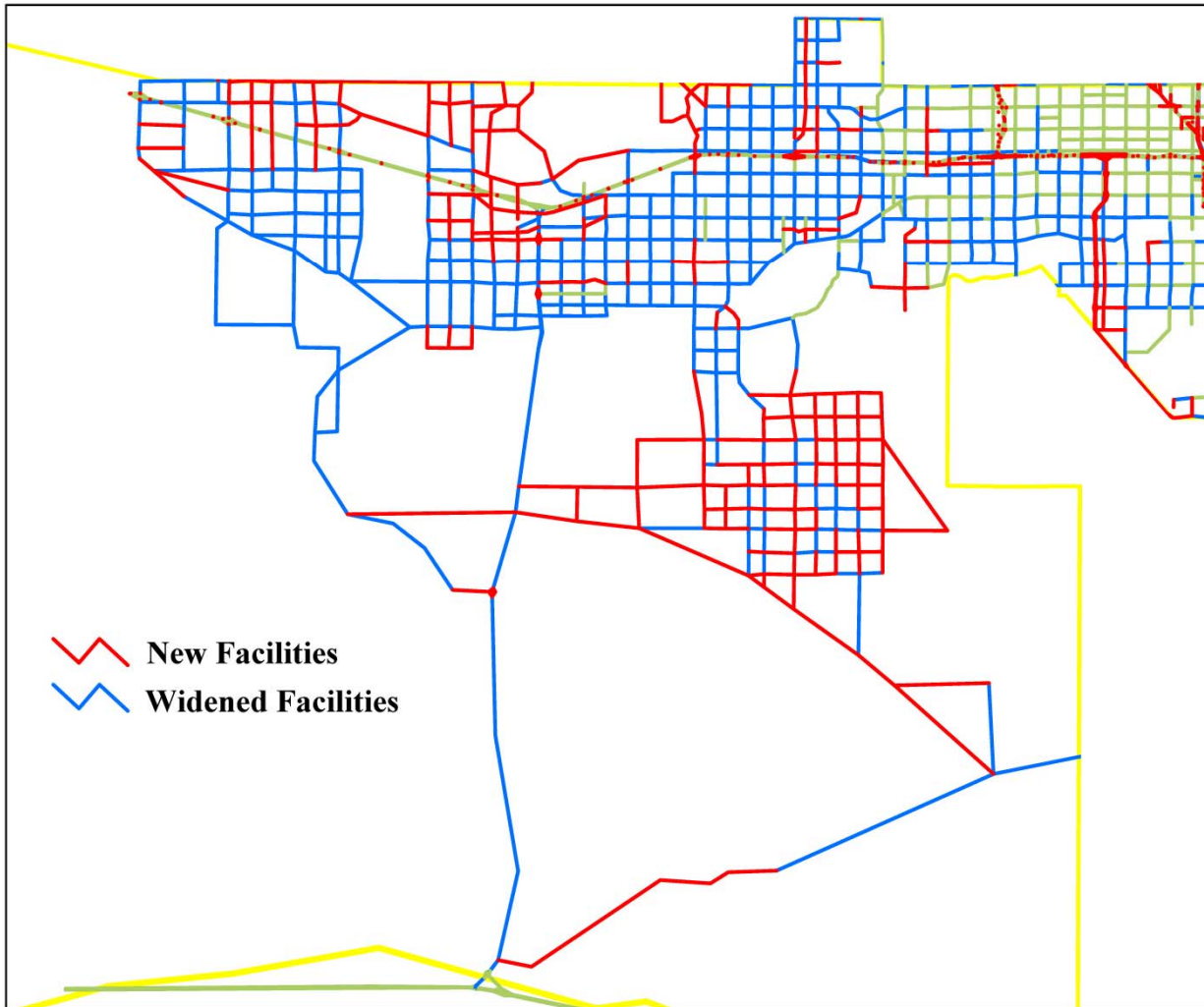
■ Consultant:

- Linda Meronek, Wilbur Smith Associates, (480) 775-4344
- Lmeronek@wilbursmith.com

■ Current Focus:

- Alternatives Analysis & Sub-area Recommendations

2000 Base Network with Additions & Widenings



**Total Network
Centerline Miles:
= 1,310**

**Total Network
Lane Miles:
= 5,481**

- DRAFT -

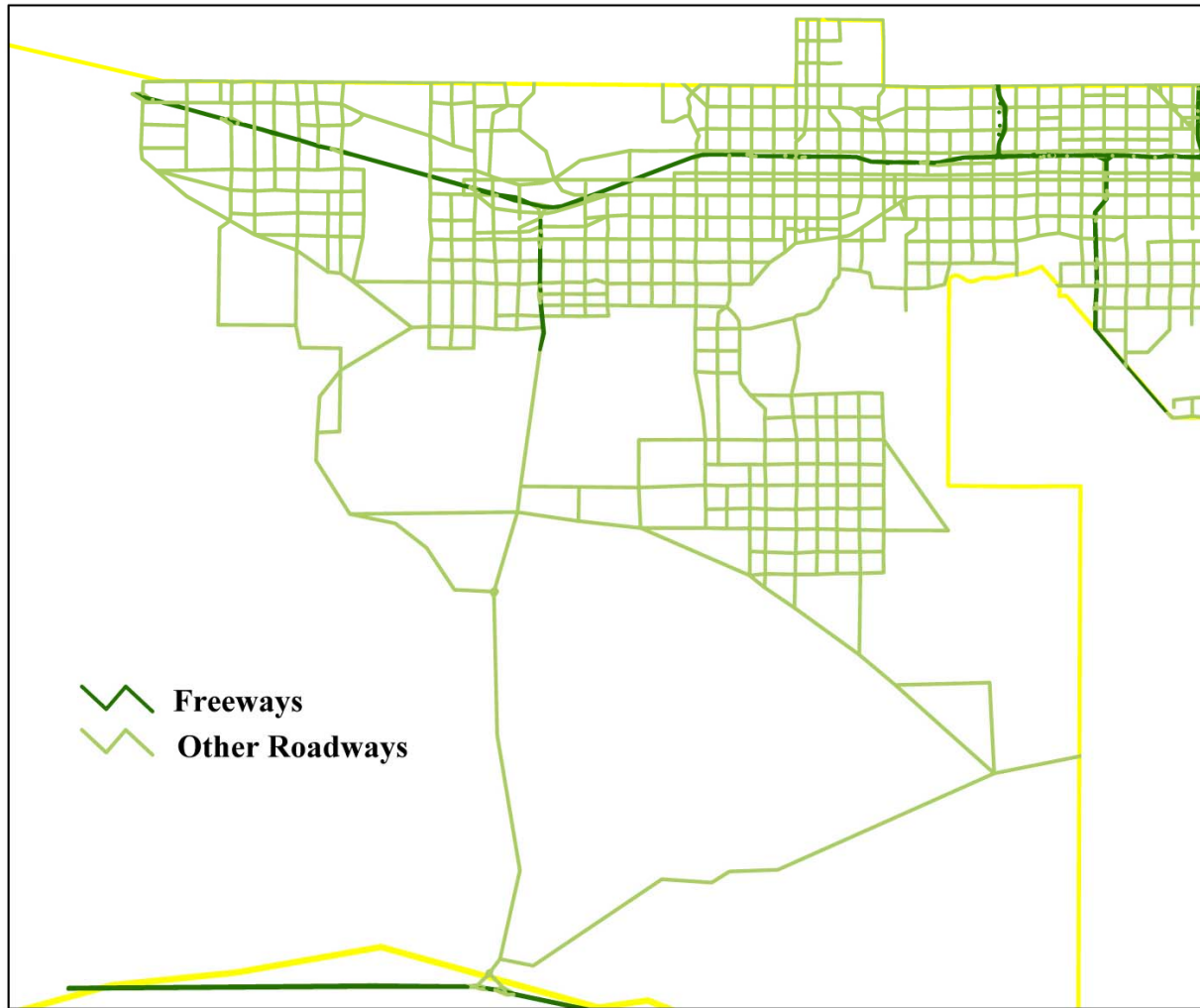
Note:

* New corridors are conceptual only and subject to revision based on input and study analysis.

* Concepts on this map were received as part of the public and agency consultation process and have not been assessed or endorsed by MAG.

Combined changes make up the Future Base Network

Enhanced Network (as modeled)



**Total Network
Centerline Miles:
= 1,310**

**Total Network
Lane Miles:
= 5,834**

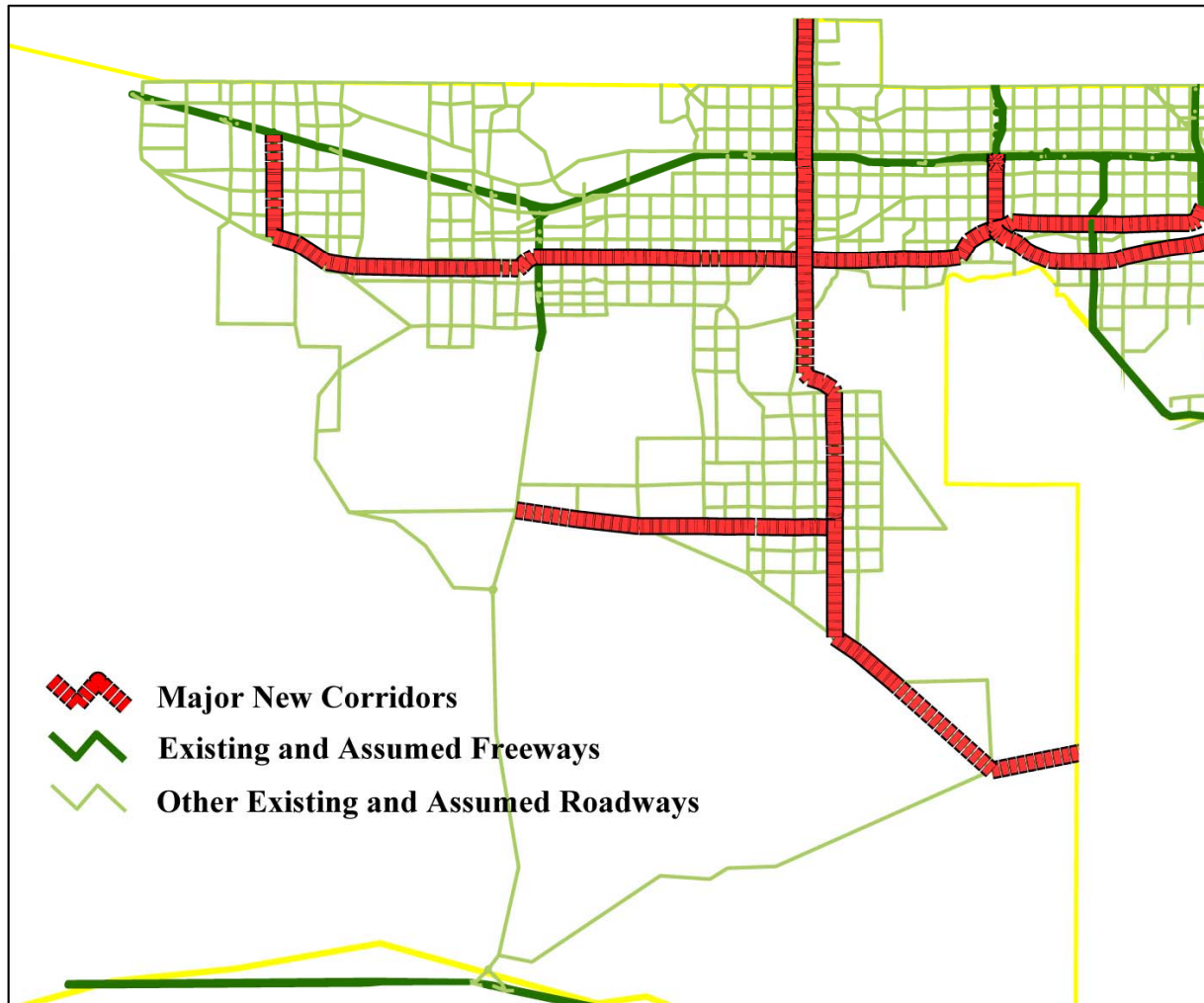
- DRAFT -

Note:

* New corridors are conceptual only and subject to revision based on input and study analysis.

* Concepts on this map were received as part of the public and agency consultation process and have not been assessed or endorsed by MAG.

New Corridors Network (as modeled)



**Total Network
Centerline Miles:
= 1,388**

**Total Network
Lane Miles:
= 6,964**

- DRAFT -

Note:

* New corridors are conceptual only and subject to revision based on input and study analysis.

* Concepts on this map were received as part of the public and agency consultation process and have not been assessed or endorsed by MAG.



MAG-CAAG SE Maricopa-Northern Pinal County Area Transportation Study

■ Contact:

- Roger Herzog, MAG, (602) 254-6300
- rherzog@mag.maricopa.gov

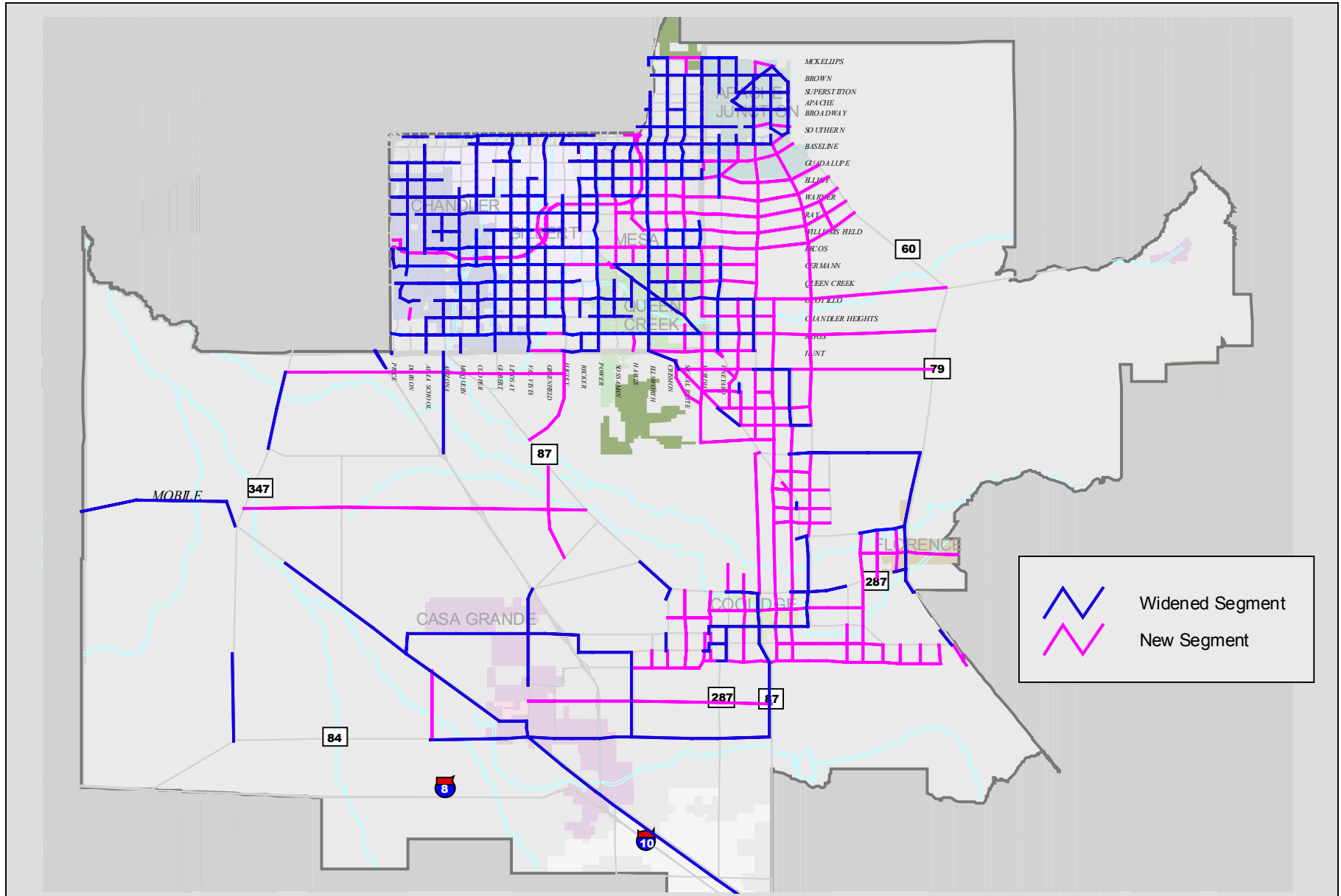
■ Consultant:

- Dan Hartig, Parsons Brinckerhoff, (480) 966-8295
- hartig@pbworld.com

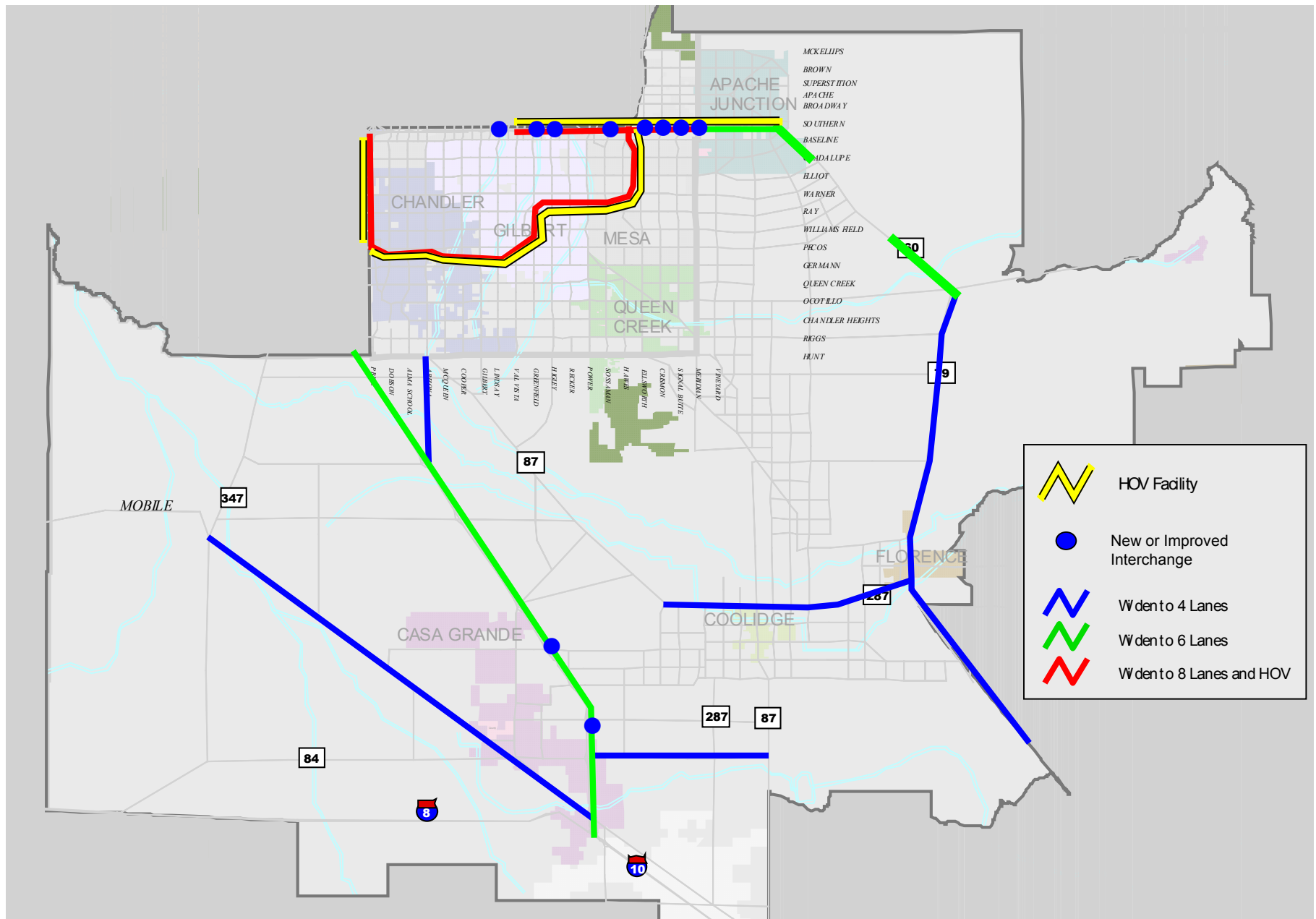
■ Current Focus:

- Alternatives Analysis & Sub-area Recommendations

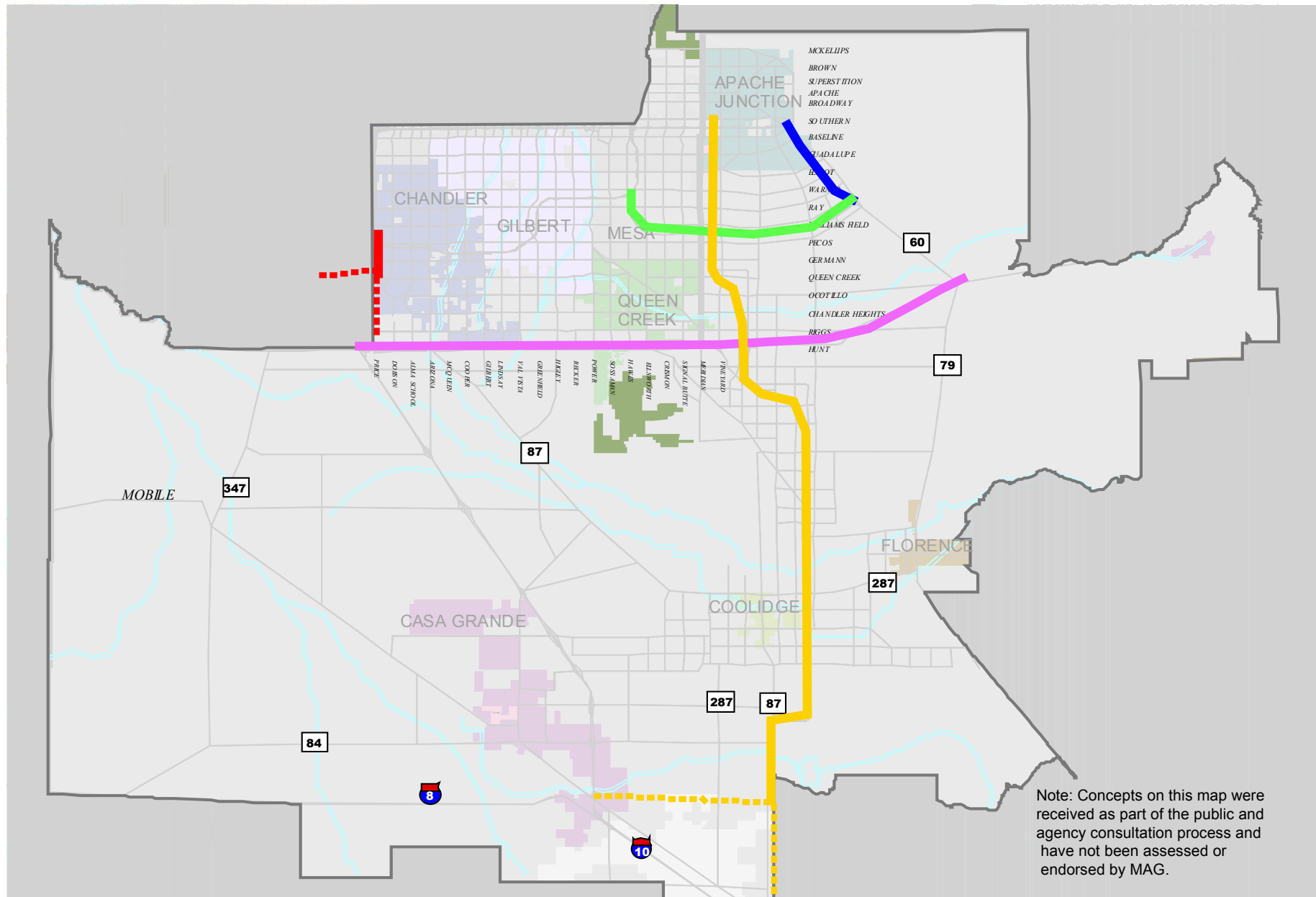
SE Maricopa/N Pinal Future Base



SE Maricopa/N Pinal Enhanced Facilities



SE Maricopa/N Pinal New Facilities



MAG Grand Avenue NW Corridor Study

■ Contact:

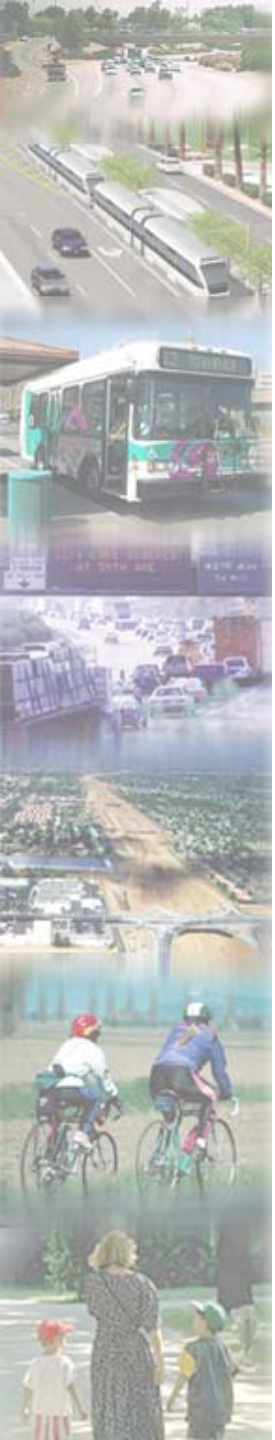
- Chris Voigt, MAG, (602) 254-6300
- cvoigt@mag.maricopa.gov

■ Consultant:

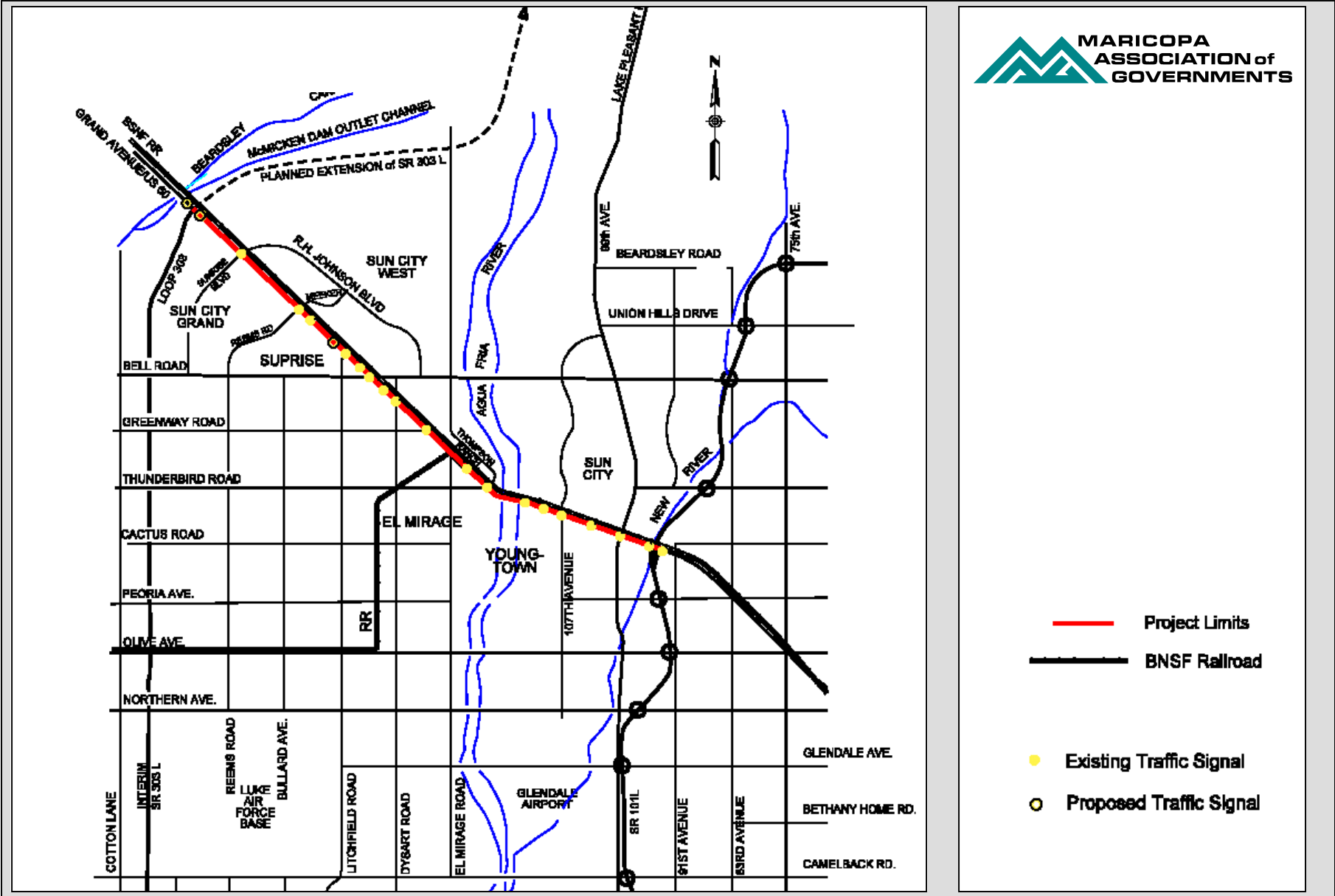
- David French, URS Corp., (602) 371-1100
- dave_french@urscorp.com

■ Current Status:

- Complete: Regional Council January 2003
- Programmed:
- DCR for Widening (FY 2006)
- New River Bridge Widening, (FY 2008, proposed)



Grand Avenue Northwest Study Area



MAG Grand Avenue NW Recommendations

(Loop 101 to 303)

Recommended Improvement

Cost
(in millions)

Responsible Agency

Priority One

- Widen Grand Avenue to six lanes
- Add turn lanes on cross streets
- Intelligent transportation systems
- Meeker/Reems grade separation interchange or
Emergency-only grade separation

\$30

\$9

\$2.5

\$30

\$6

ADOT

Local Jurisdictions

ADOT/Regional/Local Jurisdictions

ADOT/Regional/Local Jurisdictions

Local Jurisdictions/Private/Regional

Priority Three

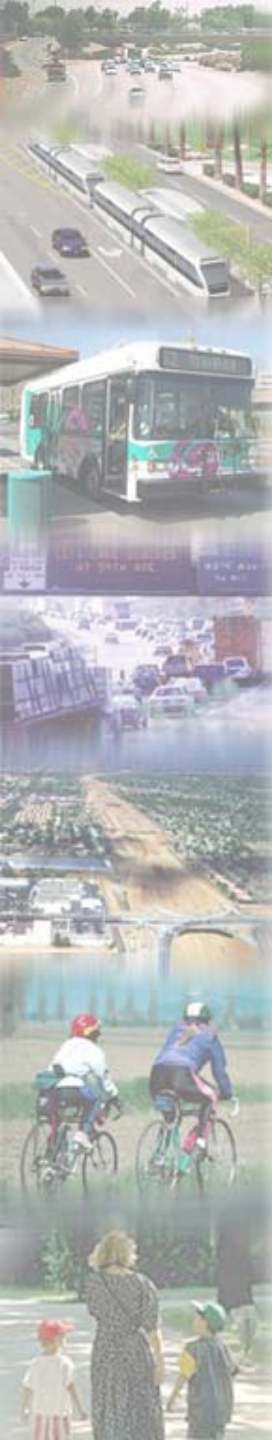
- El Mirage Road grade separation
and extension
- 103rd Avenue grade separation

\$35

\$24

ADOT/Regional/Local Jurisdictions

ADOT/Regional/Local Jurisdictions



MAG East-West Mobility Study

■ Contact:

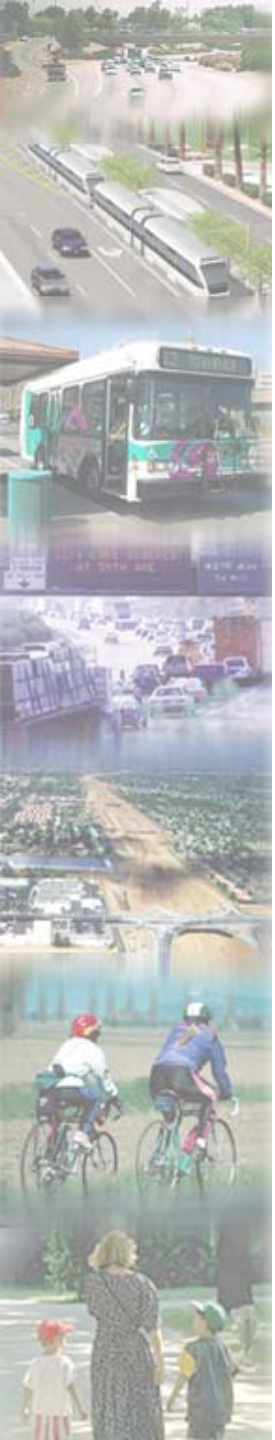
- Roger Herzog, (602) 254-6300
- Rherzog@mag.maricopa.gov

■ Consultant:

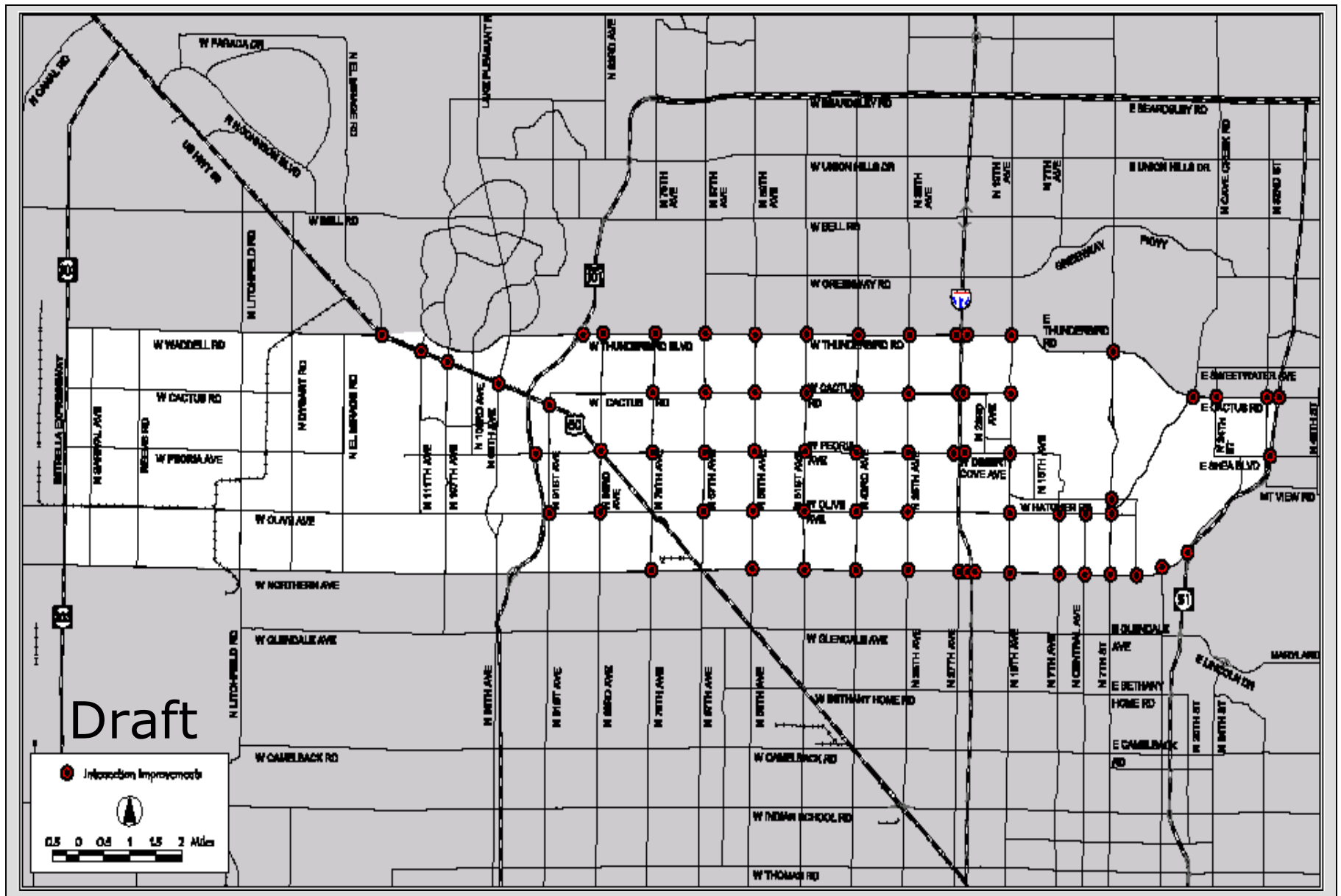
- David Bredahl, Entranco, (970) 221-3600
- dbredahl@entranco.com

■ Current Status:

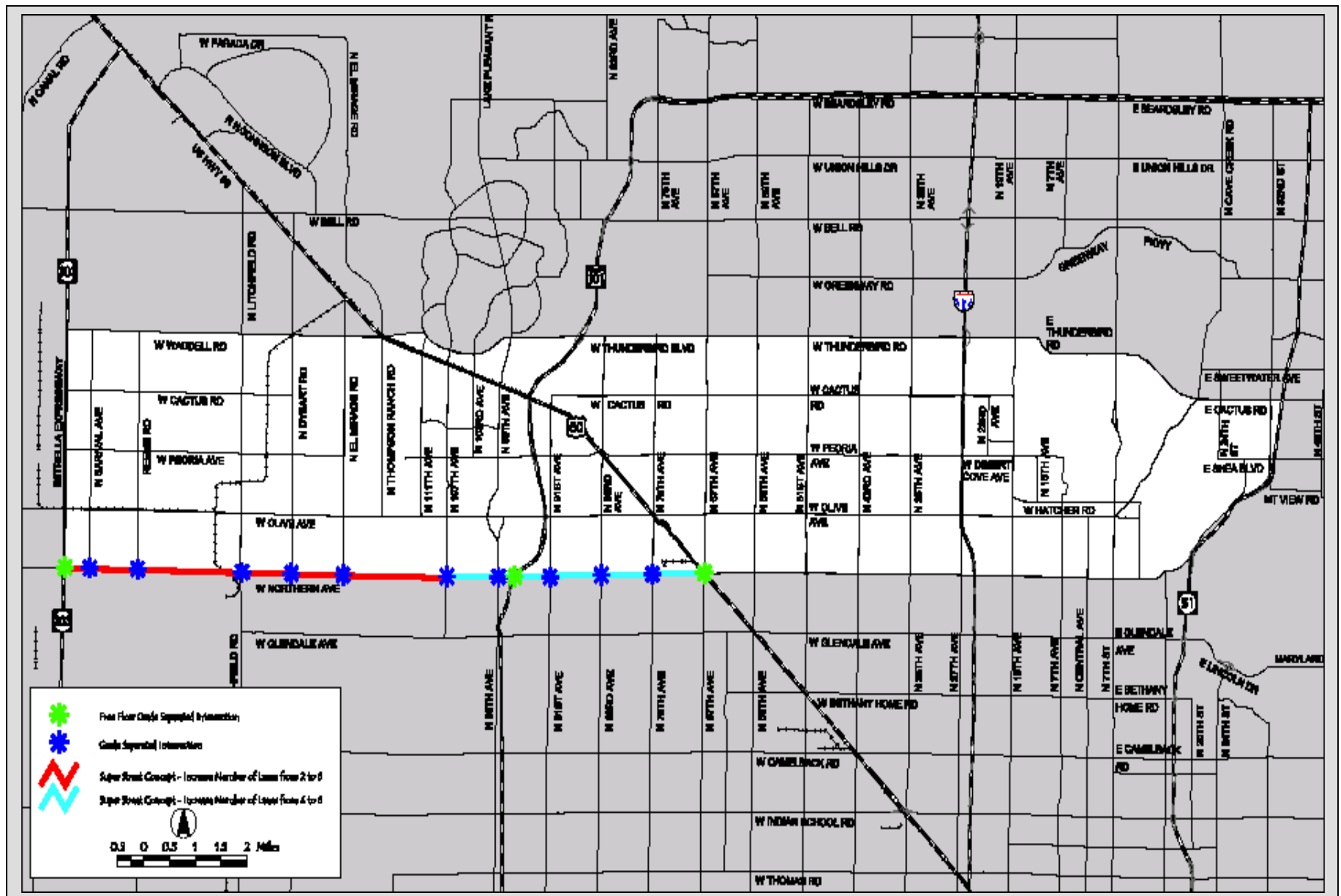
- Analysis of six options
- Two appear most feasible



East-West: Intersection Improvements



Northern Avenue Super Street



MAG Arterial Travel Speed Study

■ Contact:

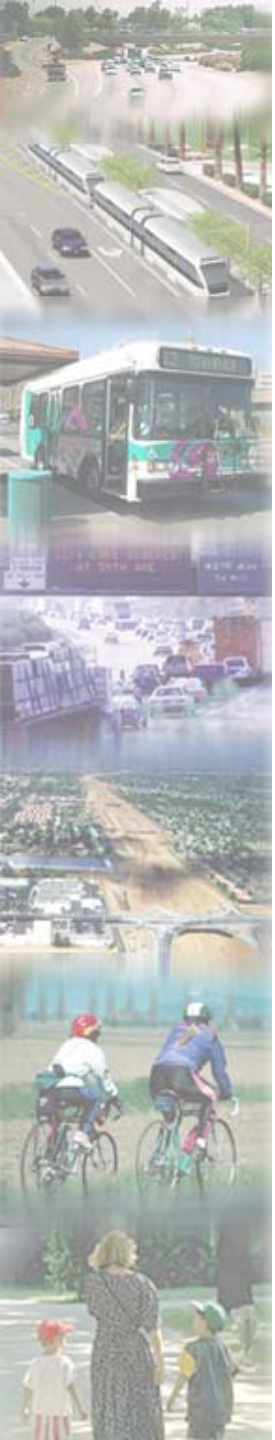
- Mark Schlappi, (602) 254-6300
- Mschlappi@mag.maricopa.gov

■ Consultant:

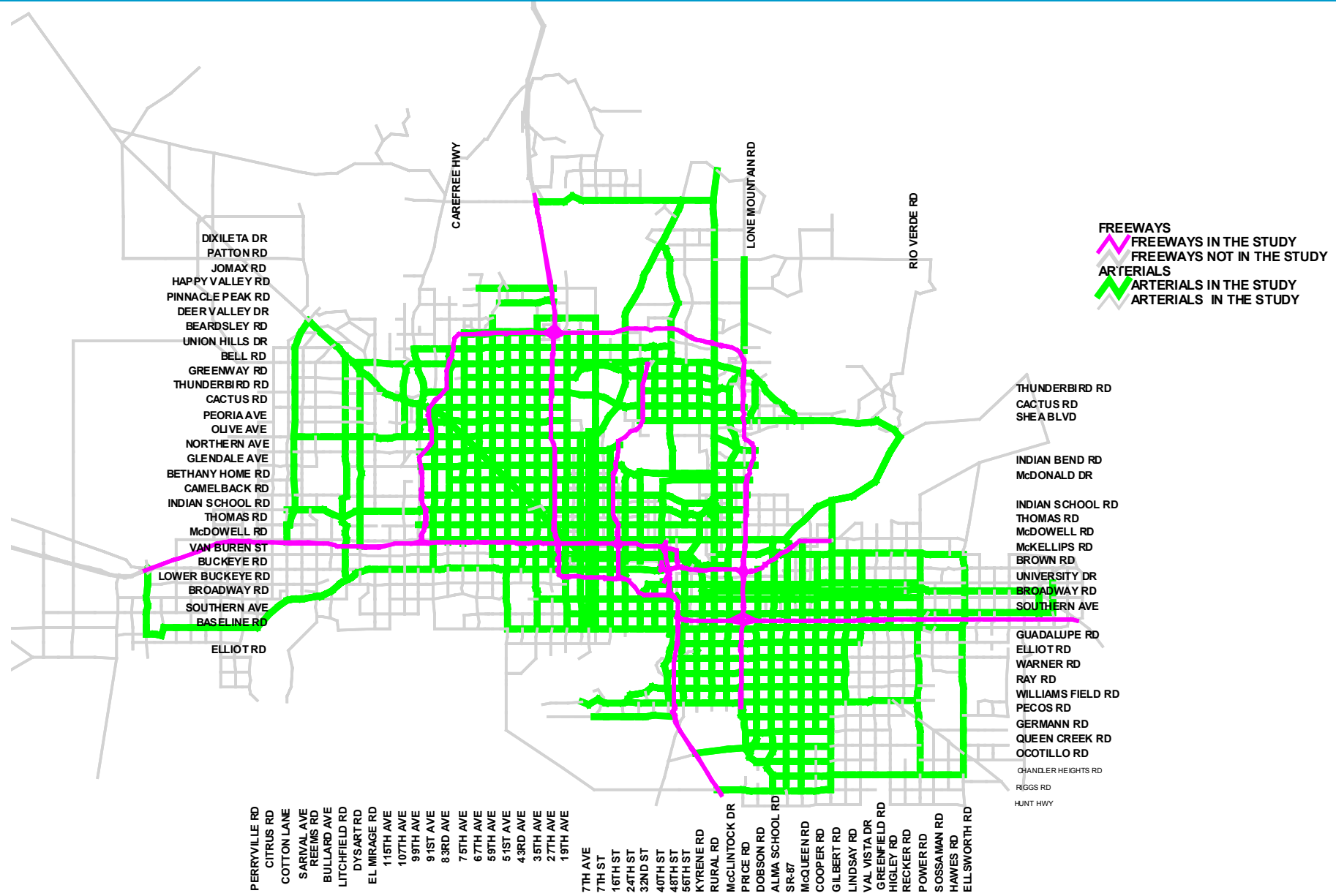
- Steve Taylor, Carter & Burgess
- (214) 638-0145
- Taylorst@c-b.com

■ Current Status:

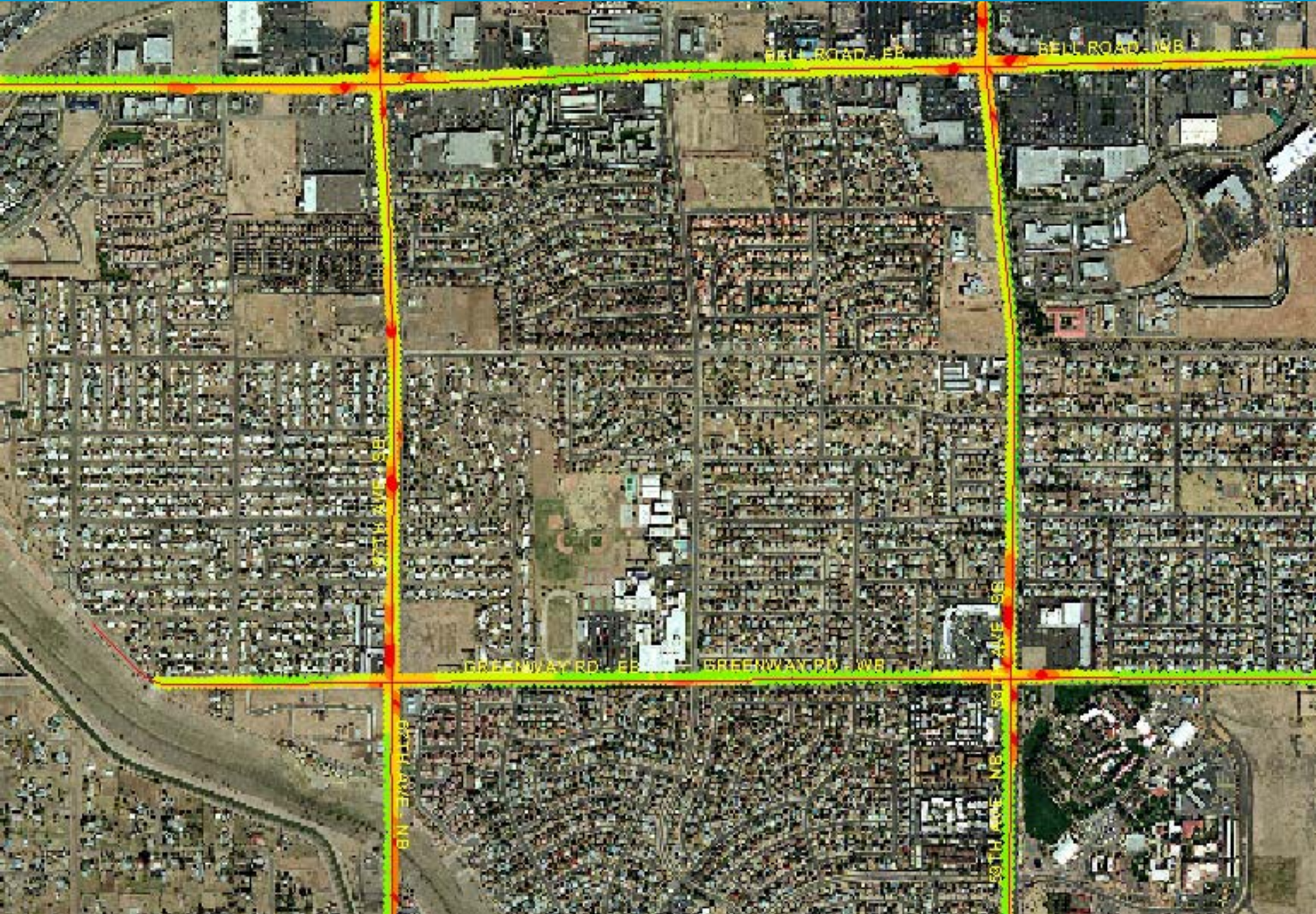
- Data collection underway



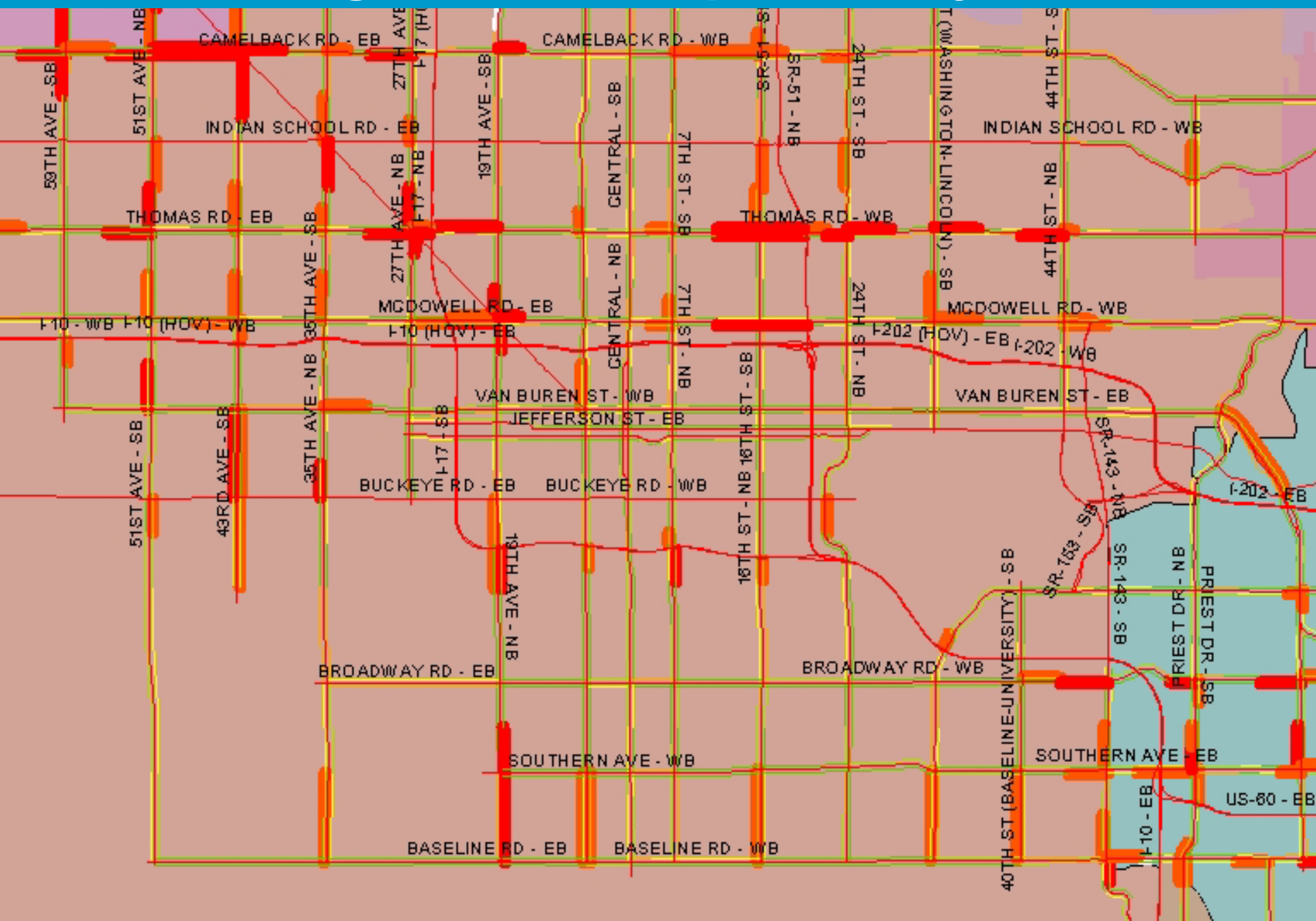
2022 MAG Regional Travel Speed Study

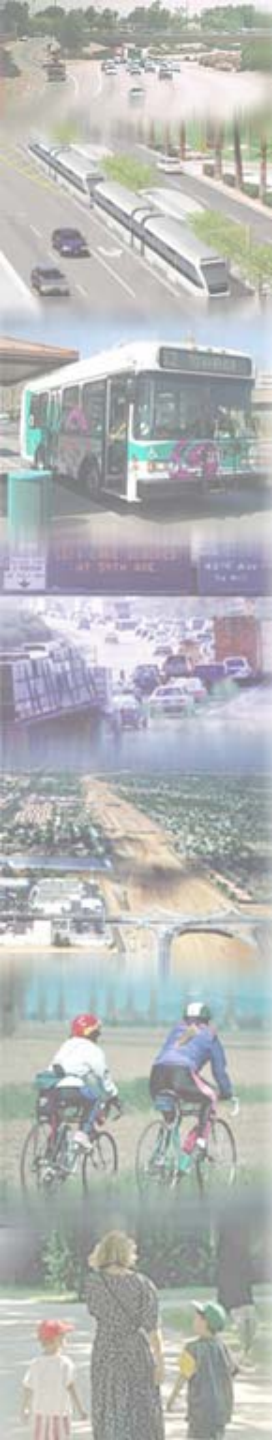


2002 MAG Regional Travel Speed Study



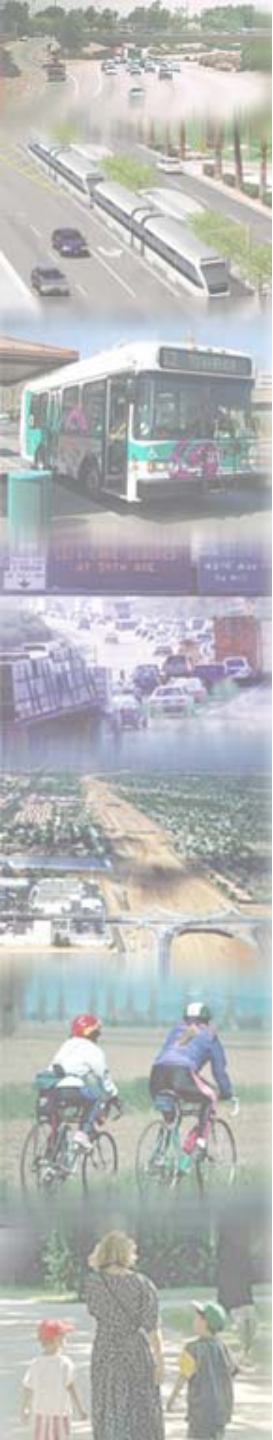
2002 MAG Regional Travel Speed Study





Regional Transportation Plan

Transportation Blueprint



Regional Transportation Plan

Transportation Blueprint

20-Year RTP

1/2-cent
sales tax
extension
projects

20-Year RTP

Federal Aid
ADOT Discretionary
HURF
Development

1/2-cent
sales tax
extension
projects

**1/2-cent
sales tax
extension
projects**



Major Steps in the RTP Process

- Background studies: mostly complete
- Goals & objectives: adopted
- Performance measures: draft
- Revenue Projections: draft
- Modeling scenarios – alternatives analysis: in process (March – June)
- Hybrid plan: June – August
- Funding & Phasing Plan: July – Sept
- Draft Plan for AQ Conformity: Sept
- Air quality conformity: Oct - Nov

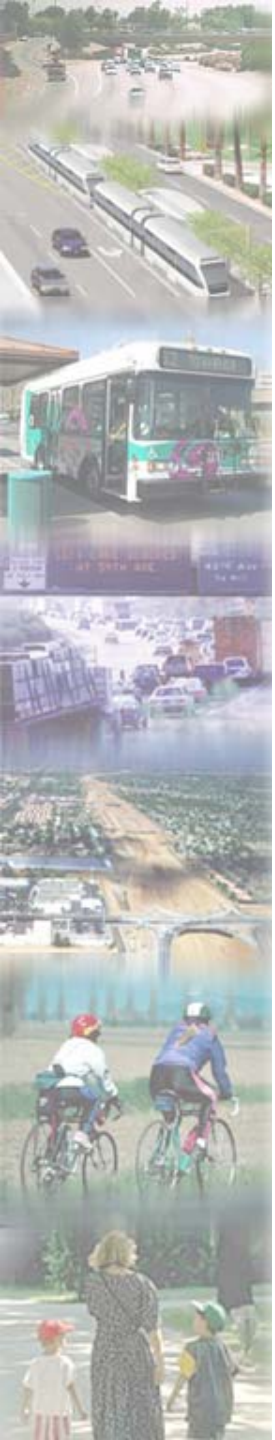


Draft Performance Measures

- Percent of maintenance and preservation needs funded.
- Accident rate per million miles of passenger travel.
- Travel time between selected origins and destinations.
- Peak period delay by facility type and geographic location.
- Peak hour speed by facility type and geographic location.
- Number of major intersections at level of service "E" or worse.
- Miles of freeways with level of service "E" or worse during peak period.
- Percentage of persons within 30 minutes travel time of employment by mode.
- Average daily truck delay.
- Jobs within one-quarter mile distance of transit service.
- Percentage of major arterial streets that have bike lanes.
- Percentage of regional connectors funded as part of the Number of miles of off-street bike/pedestrian system plan.

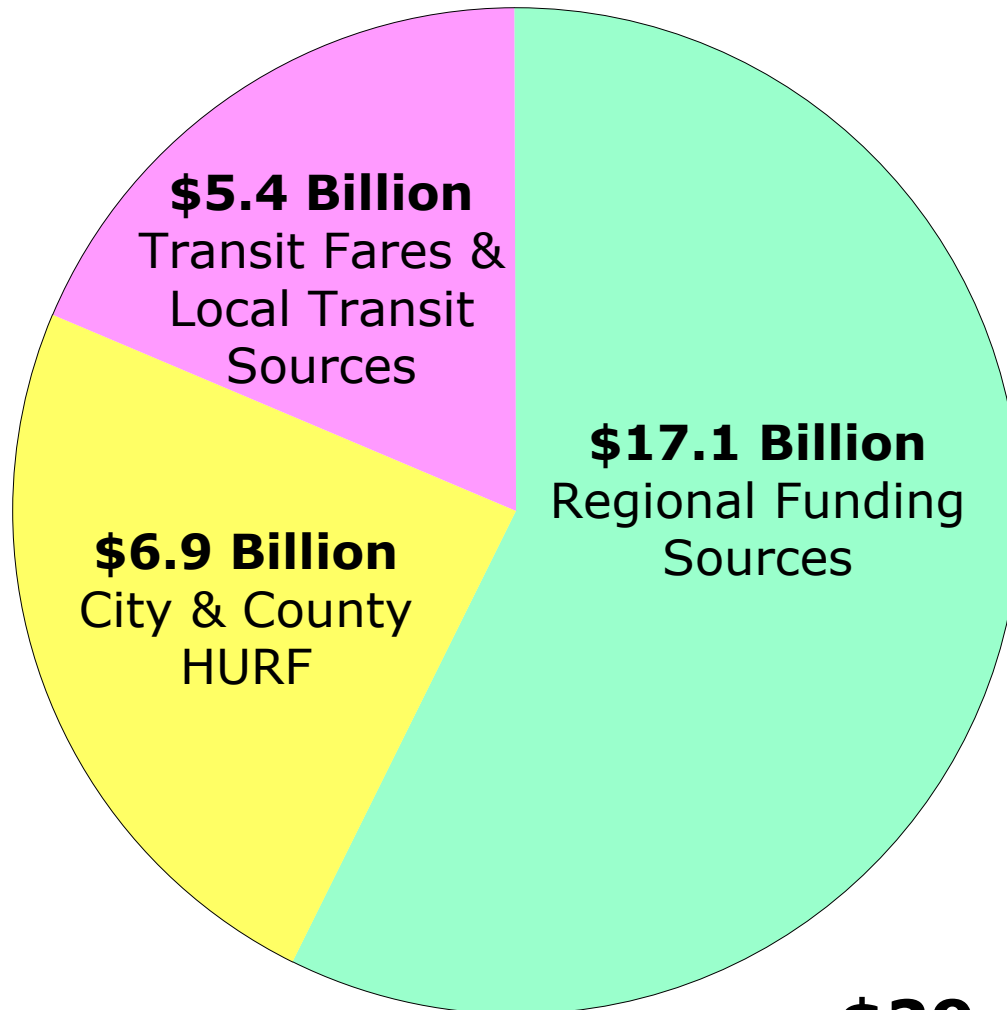
Draft Performance Measures (cont.)

- Percentage of workforce that can reach their workplace by transit within one hour with no more than one transfer.
- Per Capita VMT by facility type and mode.
- Total transit ridership.
- Households within one-quarter mile of transit.
- Transit share of travel (by transit sub-mode).
- Households within five miles of park-and-ride lots or major transit centers.
- Amount of pollutant emissions by type (NAQS).



Transportation Revenues

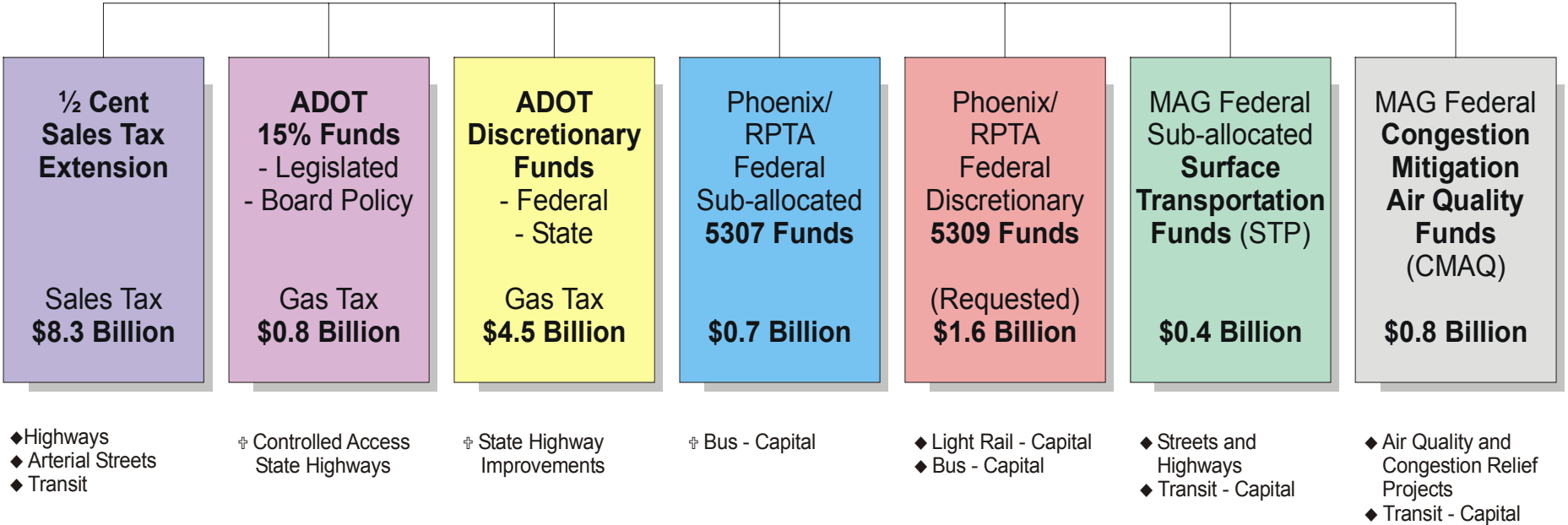
(2006-2025 in 2002 Dollars)



\$29.4 Billion

* Preliminary Estimate (3/12/03)

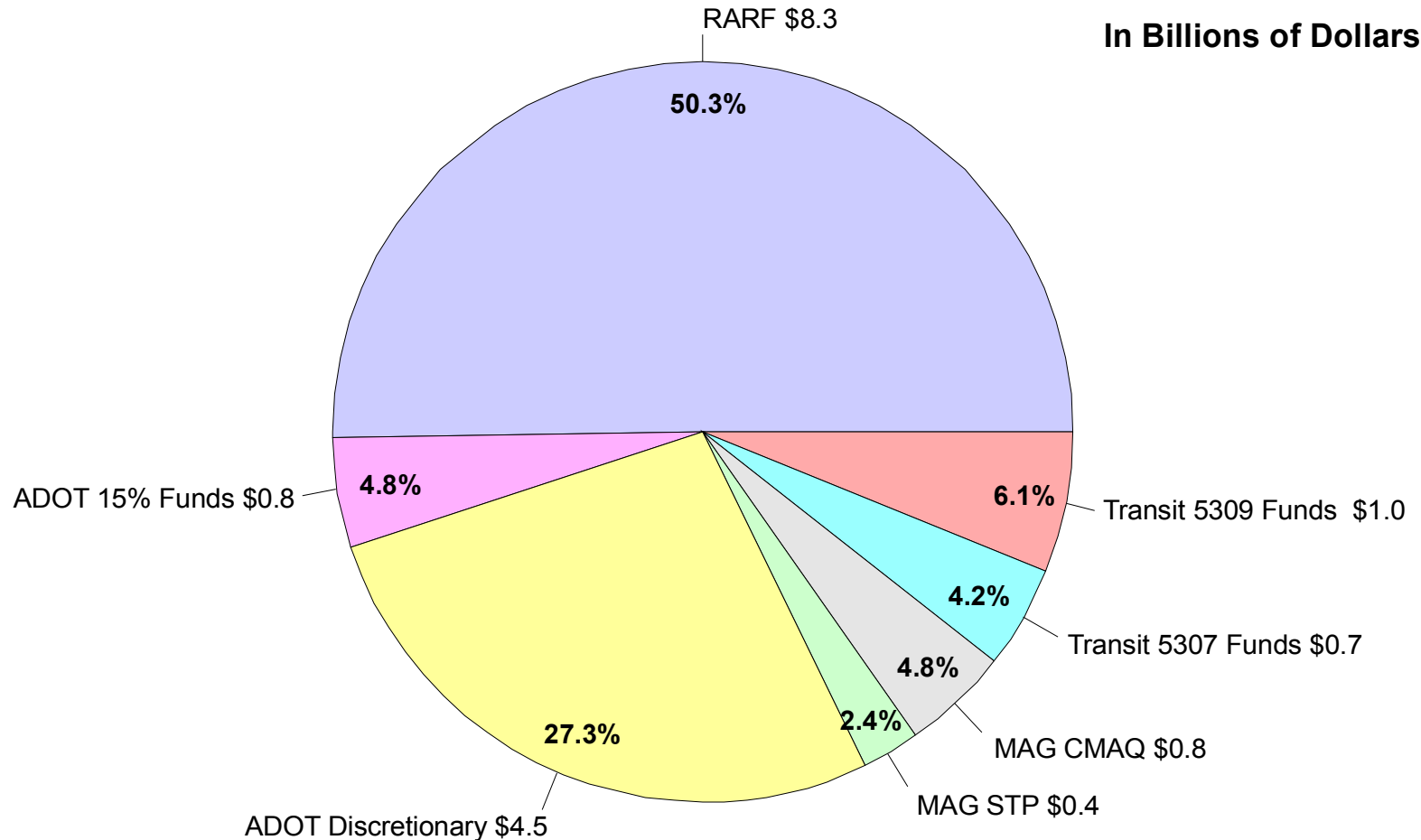
Major Regional Revenue Sources (2006-2025)*



Percentage of Funds

Major Regional Revenue Sources (2006-2025)*

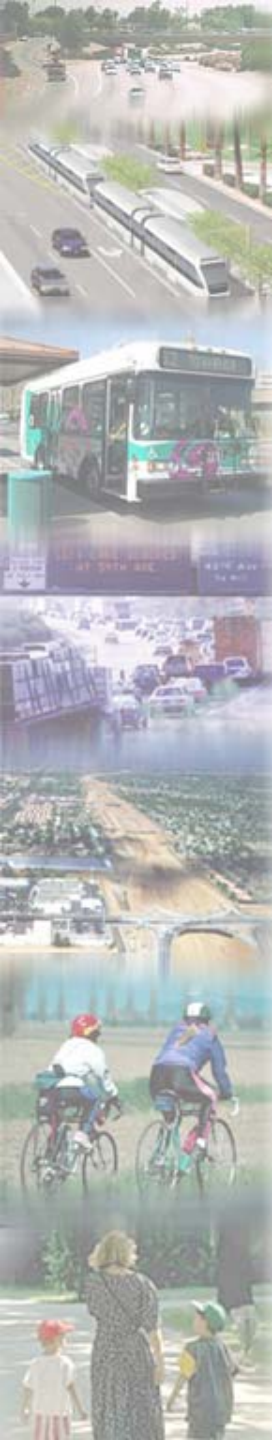
In Billions of Dollars



* Preliminary Estimate (3/12/03)

Types of Projects

- Freeways/Expressways/Parkways
- Major Streets
- Local Bus Service
- Bus Rapid Transit/ Express Bus
- Light Rail Transit
- Commuter Rail
- Bicycle/Pedestrian
- Paratransit
- Other Regional Transportation Programs

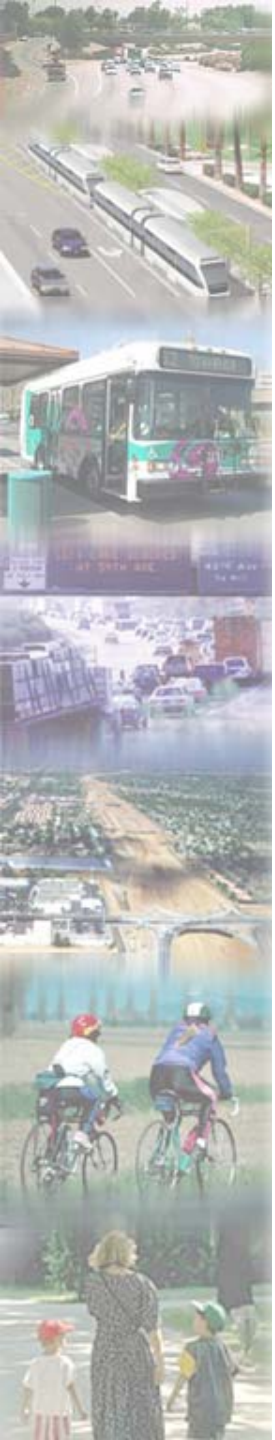


Purpose of the Scenarios

Determine how different configurations and components of the regional transportation system perform.

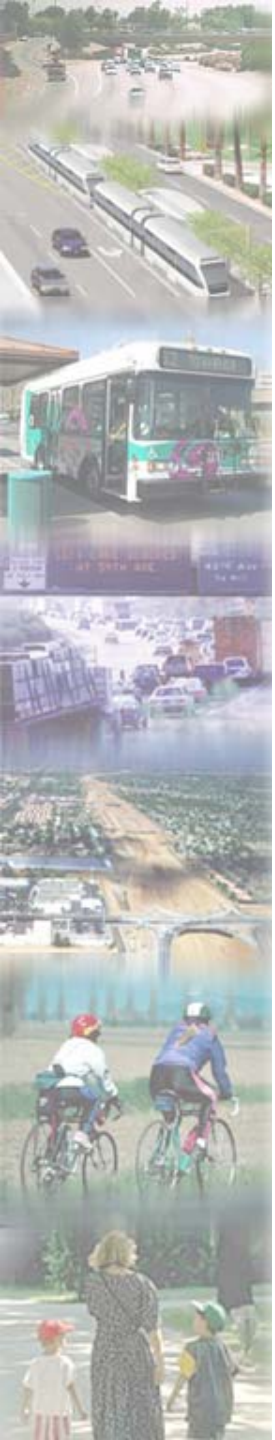
Identify deficient areas that need additional improvements.

Output will be used as part of the process to select an effective combination of projects for the plan.



Modeling Scenarios

- Scenario A - Freeway Emphasis
- Scenario B - Arterial Emphasis
- Scenario C - Transit Emphasis

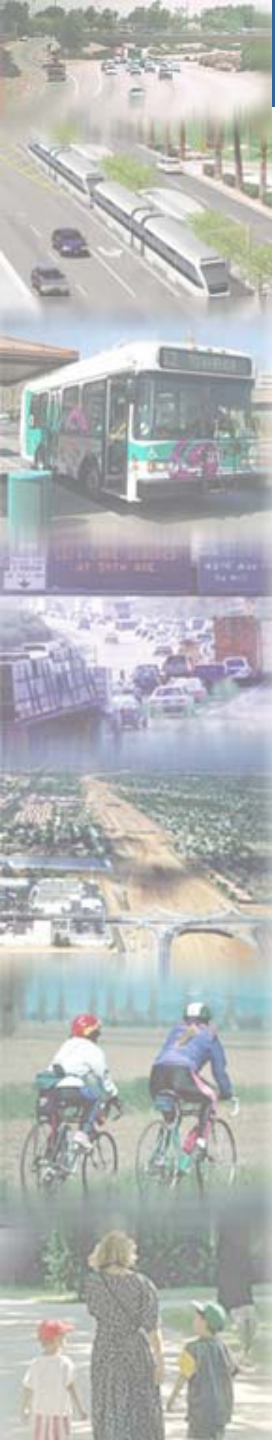




Summary of Regional Funding by Project Type

	Scenario A	Scenario B	Scenario C
Freeways	\$11,049	\$8,906	\$6,450
Major Arterial Streets	\$1,600	\$3,701	\$1,600
Transit	\$3,984	\$4,027	\$8,384
Other Regional Programs	\$602	\$602	\$602
Total	\$17,235	\$17,236	\$17,036

Note: Funding amounts shown in millions of 2002 dollars



Roadway Improvements

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Improvements Common to All Alternatives

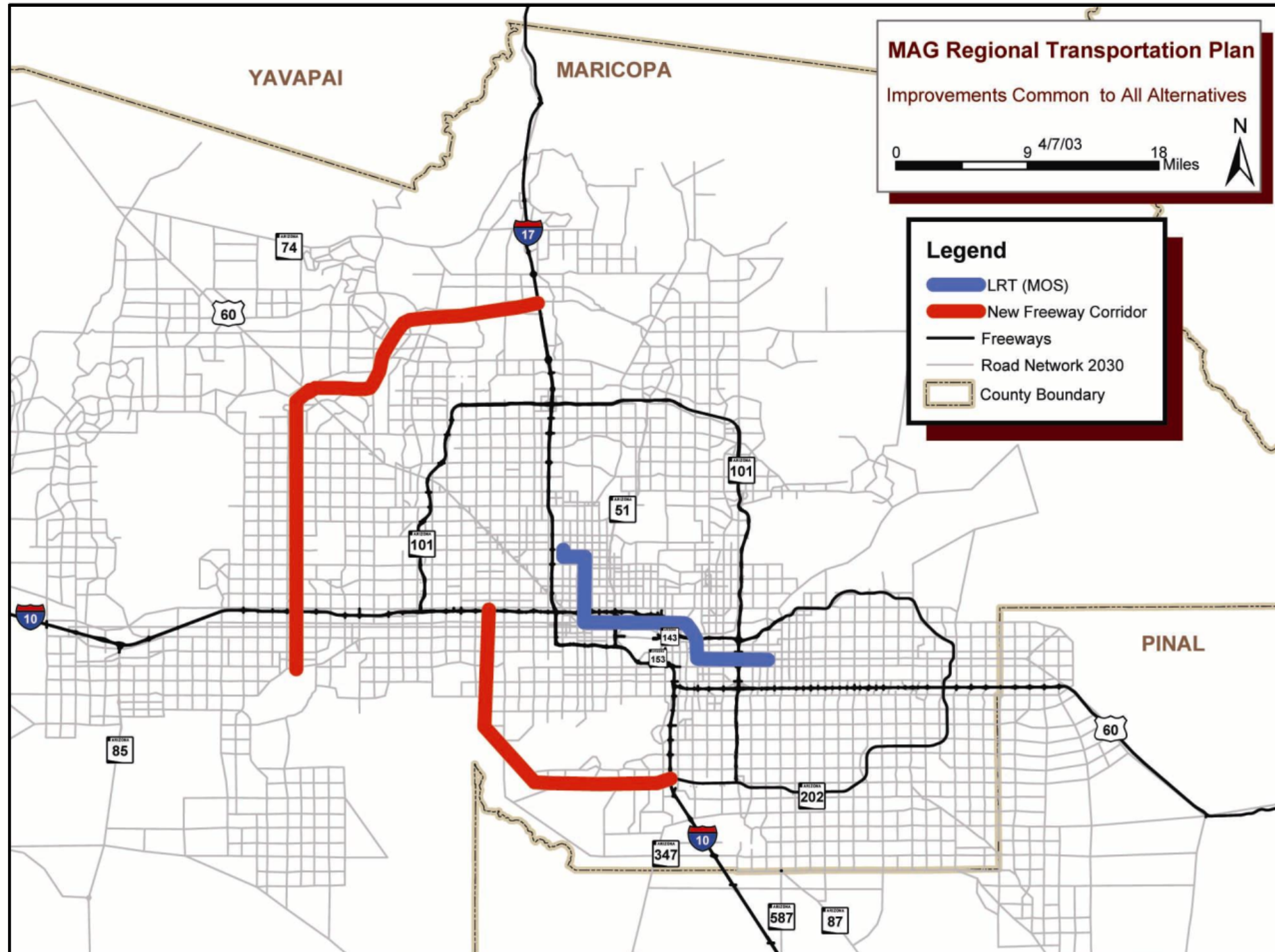
0 9 18 Miles
4/7/03



Legend

- LRT (MOS)
- New Freeway Corridor
- Freeways
- Road Network 2030
- County Boundary

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Roadway System Improvements Modeling Scenario A

4/07/03

0 8 16 Miles



Legend

- Interchange Improvements
- New Interchange
- Longterm Capacity Improvements
- New Freeway Corridor
- Pinal County Freeway Corridor
- New General Purpose Lane
- New C-D Road
- New Auxiliary Lane
- Freeways
- Road Network 2030
- County Boundary

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Roadway System Improvements Modeling Scenario B

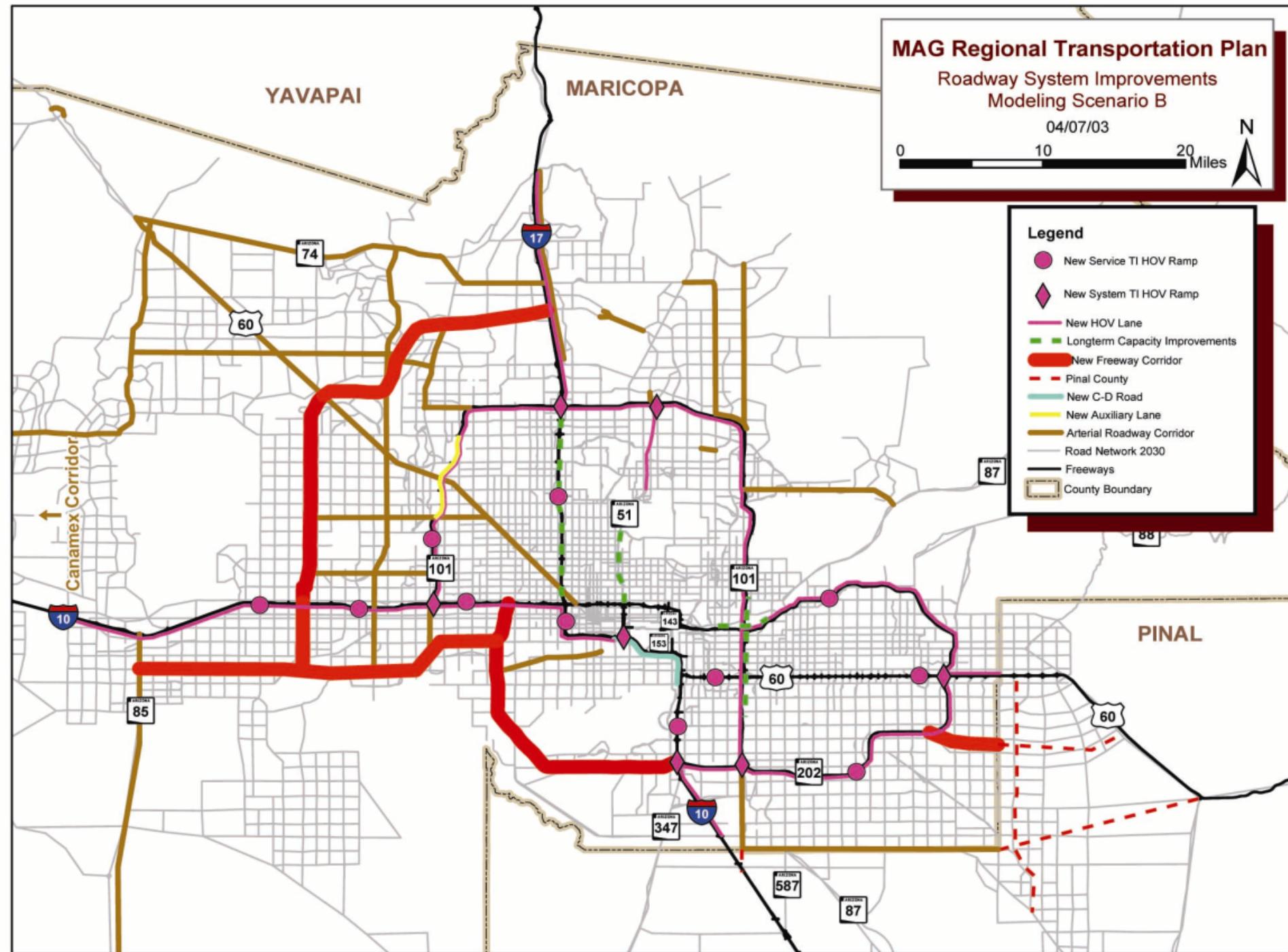
04/07/03

0 10 20 Miles



Legend

- New Service TI HOV Ramp
- New System TI HOV Ramp
- New HOV Lane
- Longterm Capacity Improvements
- New Freeway Corridor
- Pinal County
- New C-D Road
- New Auxiliary Lane
- Arterial Roadway Corridor
- Road Network 2030
- Freeways
- County Boundary



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Roadway System Improvements
Modeling Scenario C

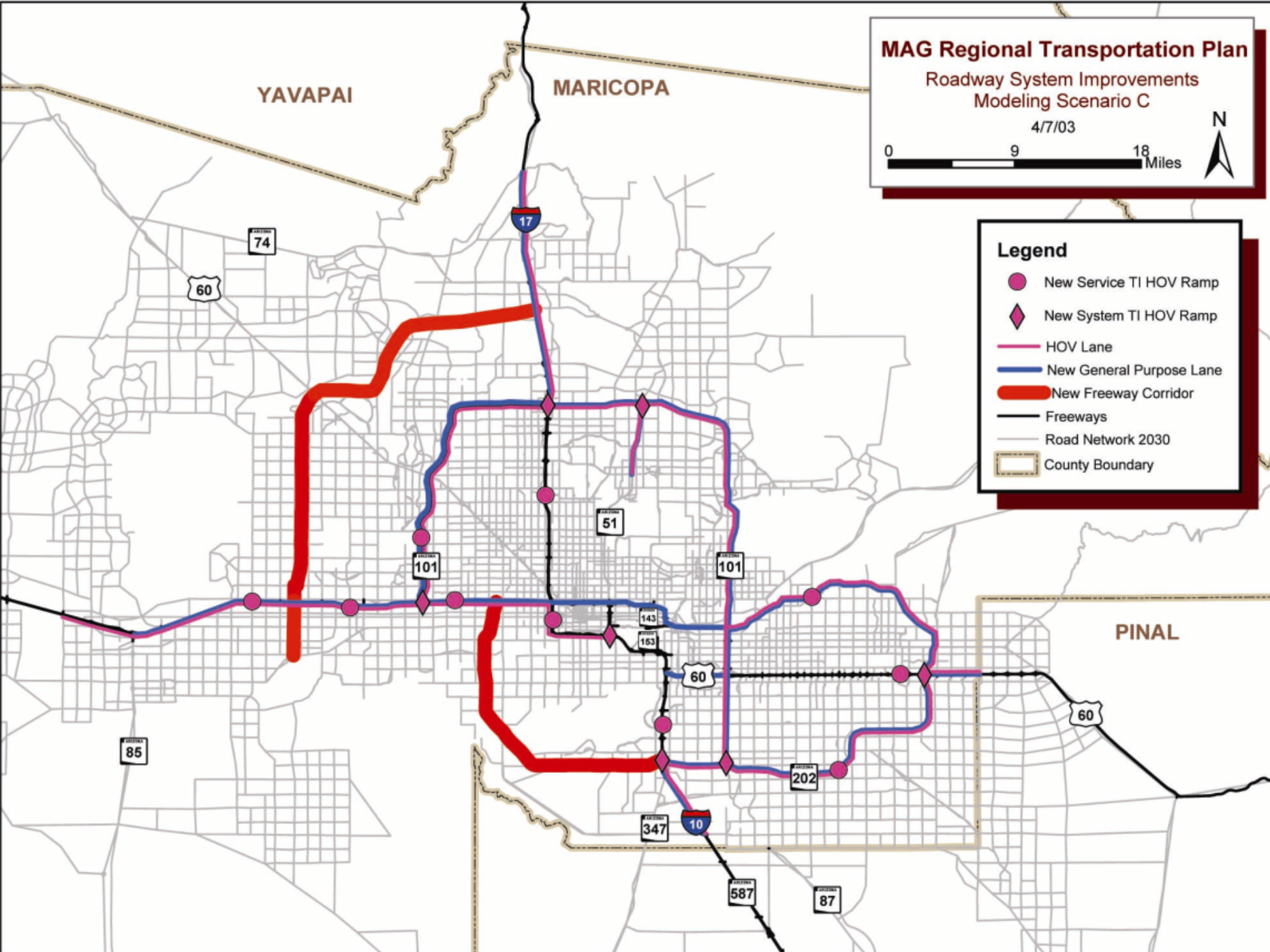
4/7/03

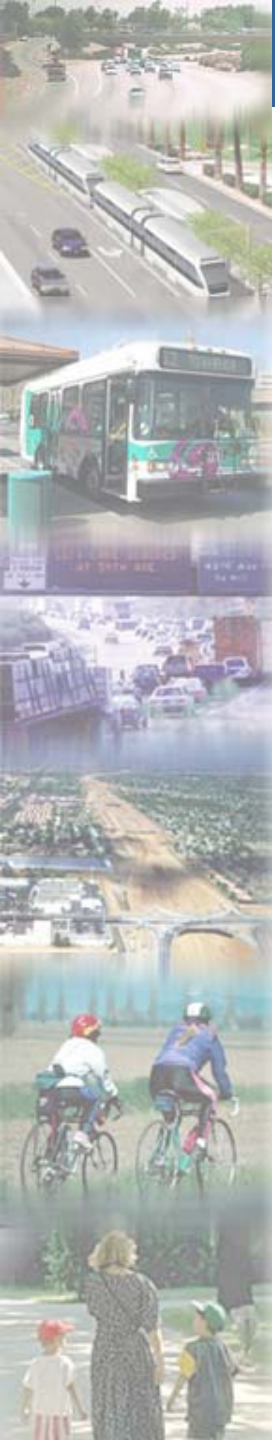
0 9 18 Miles



Legend

- New Service TI HOV Ramp
- ◆ New System TI HOV Ramp
- HOV Lane
- New General Purpose Lane
- New Freeway Corridor
- Freeways
- Road Network 2030
- ▭ County Boundary





Transit Improvements

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Regional Bus Grid
2002

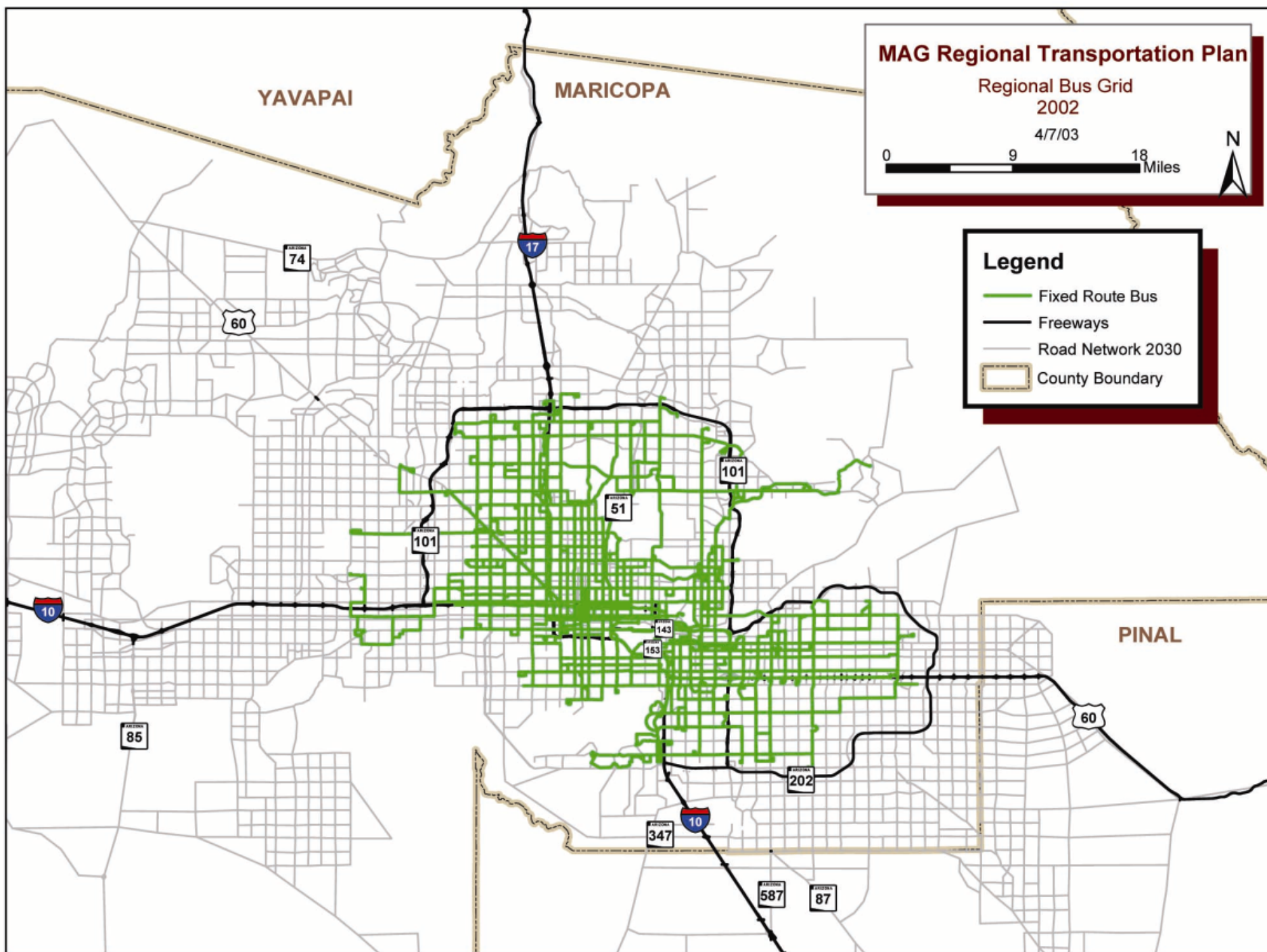
4/7/03

0 9 18 Miles



Legend

- Fixed Route Bus
- Freeways
- Road Network 2030
- County Boundary



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Regional Bus Grid
Modeling Scenario A and B

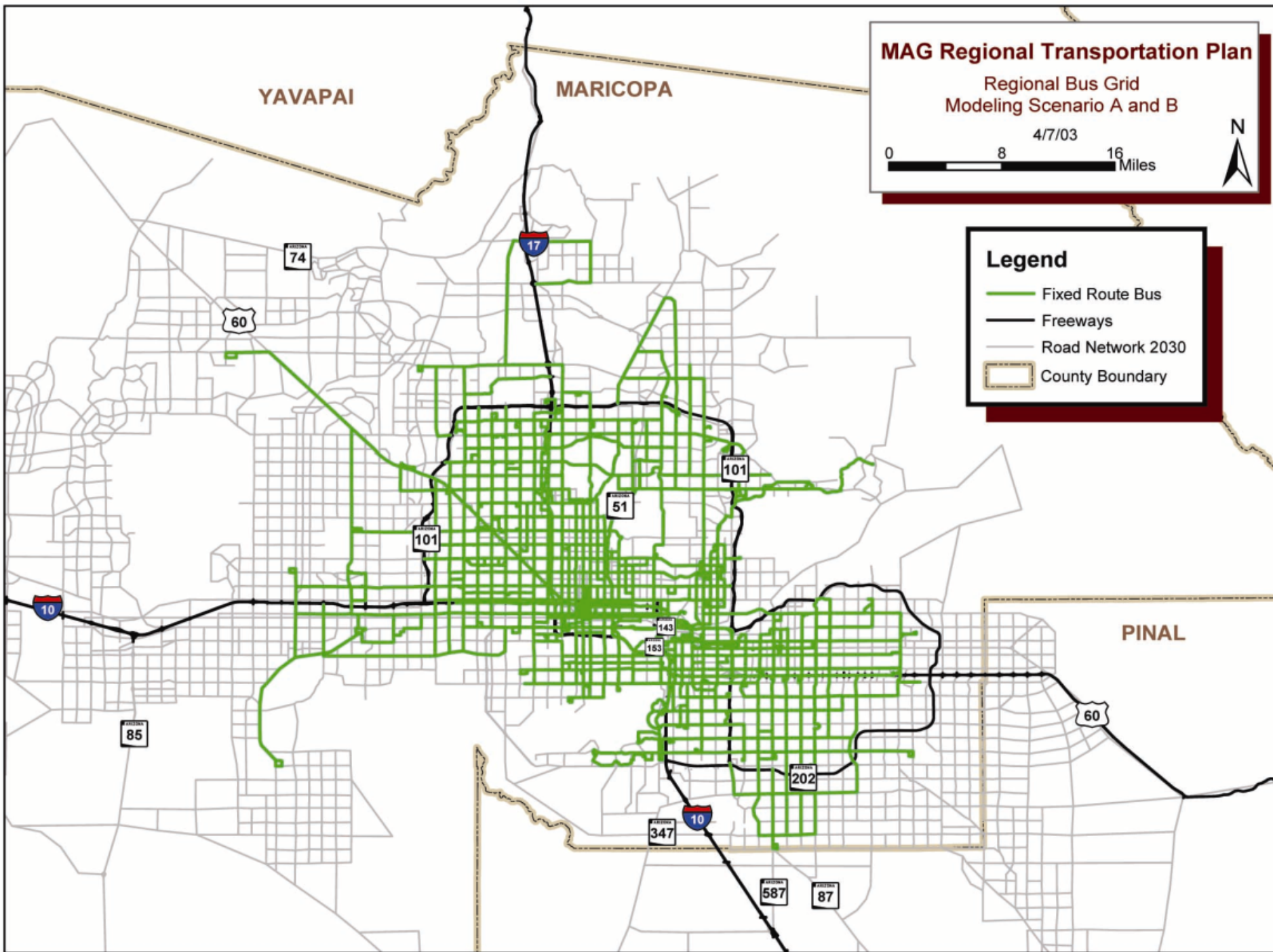
4/7/03

0 8 16 Miles



Legend

- Fixed Route Bus
- Freeways
- Road Network 2030
- County Boundary



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Regional Bus Grid
Modeling Scenario C

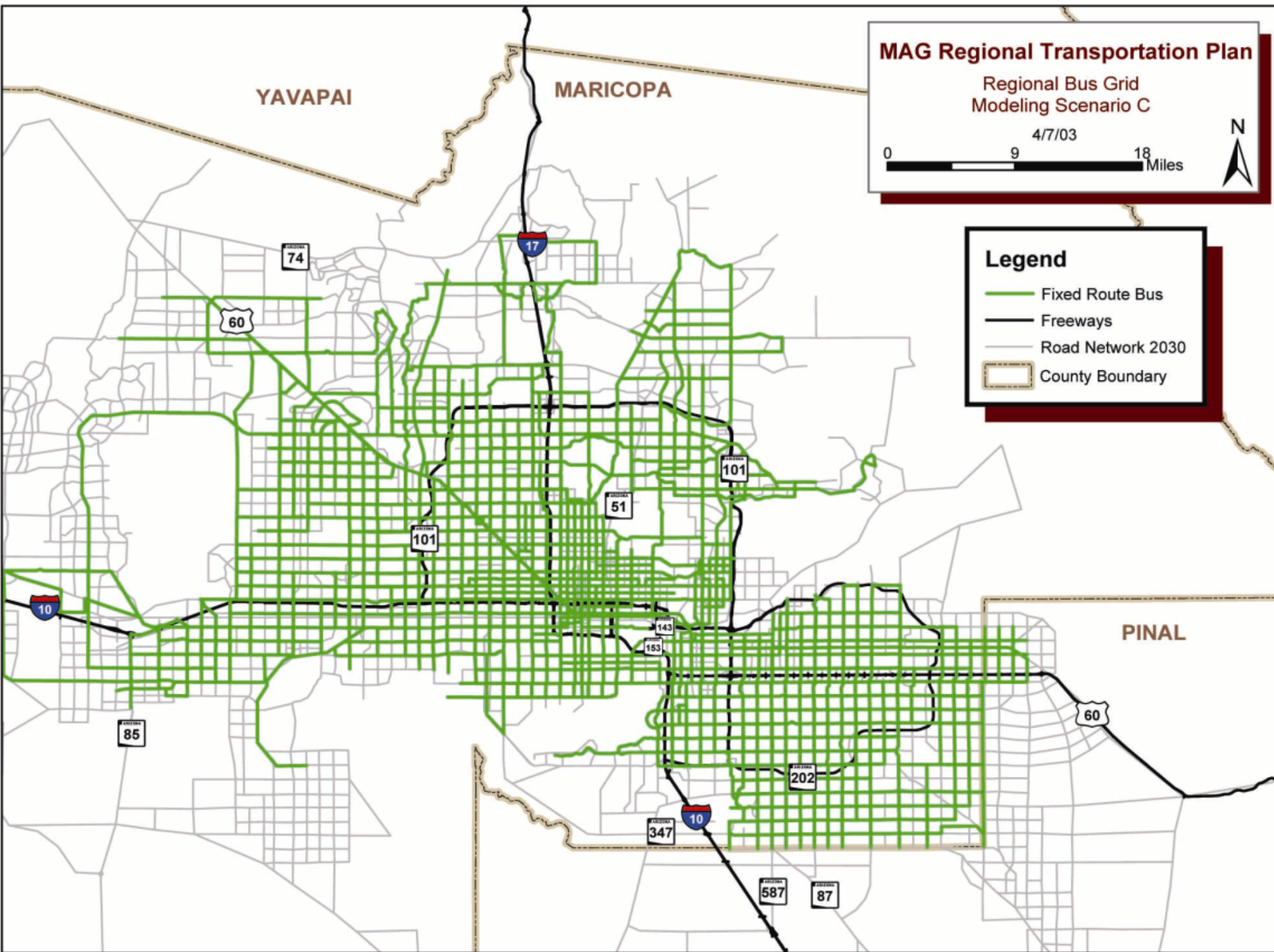
4/7/03

0 9 18 Miles



Legend

- Fixed Route Bus
- Freeways
- Road Network 2030
- County Boundary



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Express Bus and
High Capacity Transit Corridors
Modeling Scenarios A, B & C

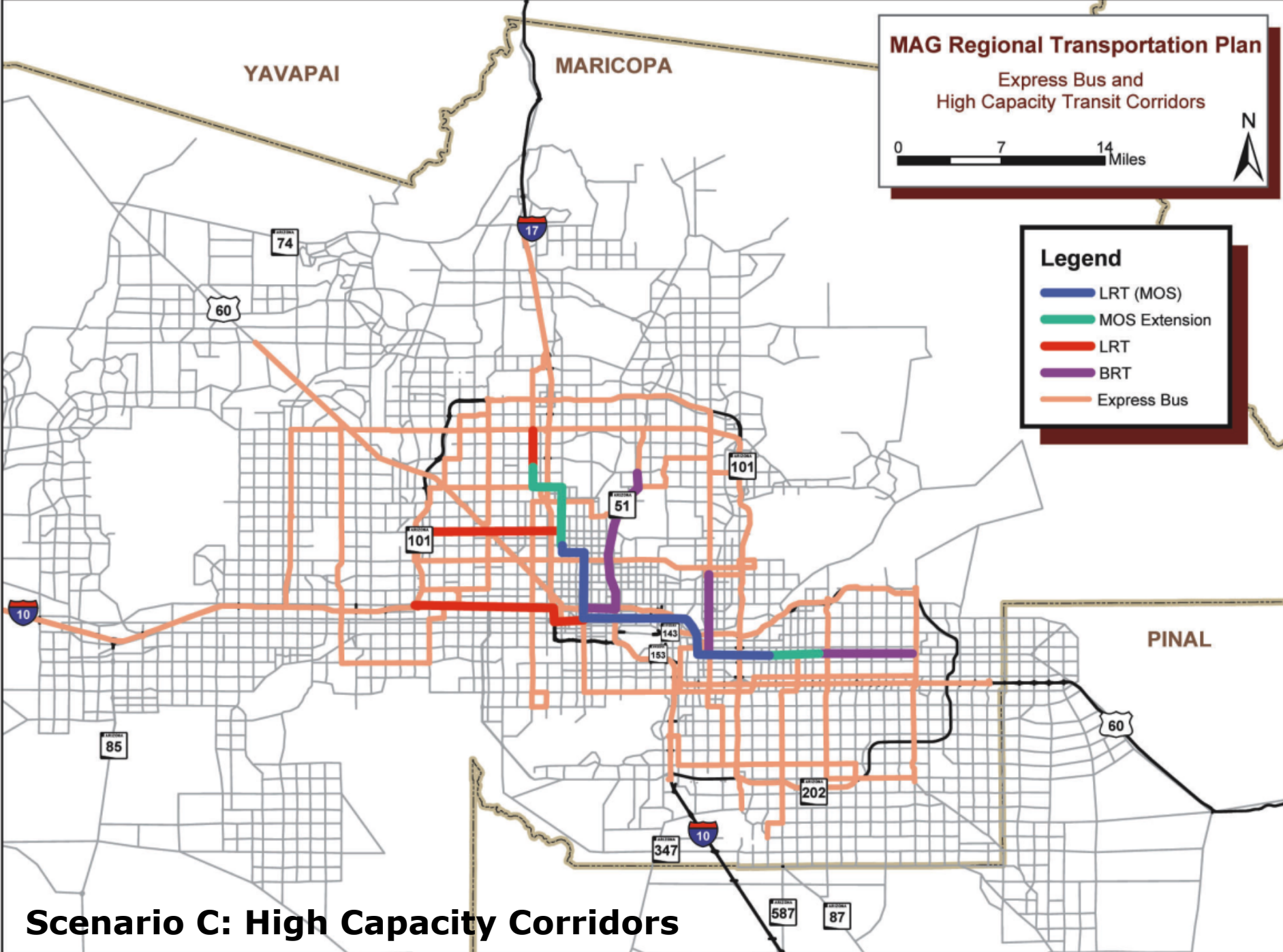
0 9 18 Miles
4/7/03



Legend

- LRT (MOS)
- Express Bus/High Capacity Transit
- Freeways
- Road Network 2030
- County Boundary

PINAL



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Express Bus and
High Capacity Transit Corridors

0 7 14 Miles



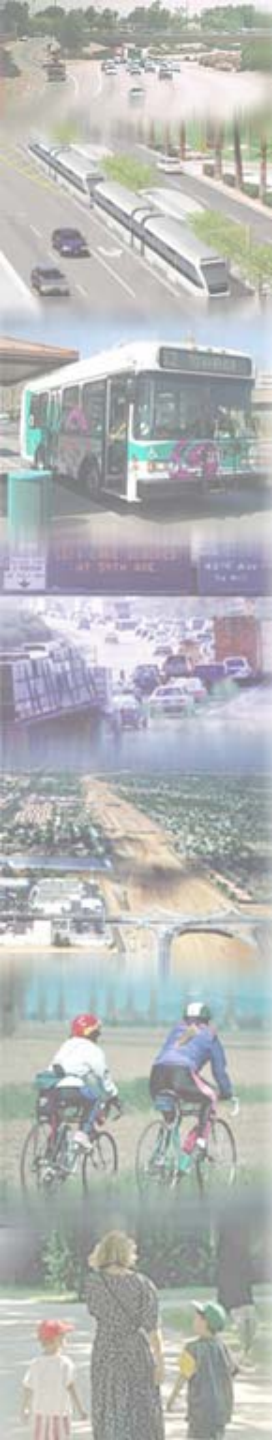
Legend

- LRT (MOS)
- MOS Extension
- LRT
- BRT
- Express Bus

Scenario C: High Capacity Corridors

MAG Regional Transportation Plan Process

[illegible]



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